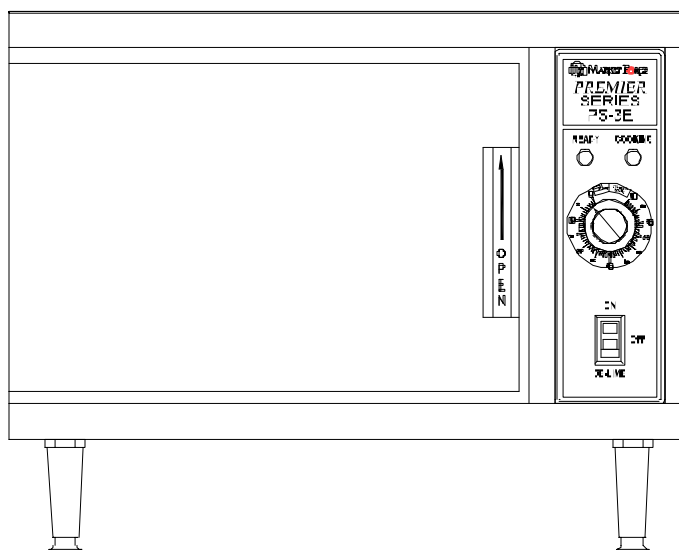


INSTALLATION, OPERATION AND PARTS MANUAL

ELECTRIC CONVECTION STEAMER

MODELS: PS-3E
PS-6E



7622R0



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OWNER'S MANUAL

ELECTRIC COMPACT CONVECTION OVEN

MODELS:

- 4200
- 4292



MARKET FORGE
INDUSTRIES INC.

An Employee Owned Company

FORM NO.: S-2374 REV: A 02/07

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INTRODUCTION

This service and parts manual contains general information, installation, operation, principles of operation, trouble-shooting and maintenance information for the Market Forge Model 4200 Electric Compact Convection Oven. Also included are parts lists, in which each replaceable part is identified and shown in an accompanying illustration.

DESCRIPTION

The Market Forge Model 4200 Electric Compact Convection Oven is an electrically powered convection oven designed to achieve high volume cooking with a minimum of power consumption. The unit consists of a heavily insulated cooking compartment fitted with a two speed convector blower and heated by electric elements. All oven controls are located on a panel on the right front of the oven as seen from the front.

OVEN COMPONENTS

The major assemblies of the model 4200 are the stainless steel and flat back painted steel cabinet enclosure, door with window, porcelain cooking compartment with nine-position shelf supports, heating element and contractor assembly, and control panel assembly. Controls and indicators include the thermostat, main power switch, blower speed switch, cool down/switch, elements on indicator light, 60-minute timer, and elements only switch. The oven is available in variety of mounting configurations: 4" 102mm high-legs, 27" 686mm legs with shelf, or stacked on top of another Model 4200 with the bottom unit on 18" 457mm stainless steel legs with shelf.

BASIC FUNCTIONING

The Model 4200 becomes operational when the power switch is placed in the ON position, door is closed, and thermostat set. Contrac-

tors located in the control section close the circuit to heating elements located at the right of the cooking chamber. When the chamber reaches the preset temperature, the thermostat contacts open, causing the contractors to interrupt the circuit to the heating elements. When the temperature in the chamber drops enough to close the thermostat contacts, the circuit closes again. Any number of such cycles might occur during the cooking time, ~indicated by the element indicator light coming on and off.

SERVICE

Required service, both preventive and corrective, is explained in section 5. Should repairs be required, a network of authorized agencies is available to assist with prompt service. A current directory of Authorized Service Agencies may be obtained by contacting:

Product Service Department
Market Forge Company
35 Garvey Street
Everett, MA 02149-4403
(617) 387-4100

The model and serial number must be referenced when corresponding with Market Forge. The data plate with serial number is located on the right of the bottom front trim ledge.

* We recommend that service be performed by a qualified Market Forge Authorized Service. Service performed by others will void warranty. Market Forge is not responsible for repairs made by other than authorized service agents.

INSTALLATION

RECEIVING

1. Examine shipment for external and internal damage and completeness. Transport crated oven through building, to installation area before unpacking.
2. Report any damage or shortages to carrier and Market Forge immediately.
3. **DO NOT AT ANY TIME LAY THE OVEN DOWN ON ITS TOP, RIGHT SIDE, OR FRONT. TO DO SO MAY DAMAGE THE EQUIPMENT AND VOID THE WARRANTY.**

ASSEMBLY - VENT BOX ATTACHMENT

1. Remove steam vent box and packet of screws from inside oven and attach vent box to back of oven over vent opening using five #8 sheet metal screws.

Single Oven on 4" Legs

Fasten legs to the weld nuts located on bottom panel of oven. The hex foot on the leg is adjustable.

Single Oven on 28" Legs with Shelf

1. Insert legs (*Fig. 1 No. 3*) through holes in shelf (*Fig. 1 No. 1*) Do not tighten set-screws in corners of shelf.
2. Screw leg tops (*Fig. 1 No. 2*) onto legs. (*Fig. 1 No. 3*)
3. Insert leg tops (*Fig. 1 No. 2*) through holes in angle iron frame (*Fig. 1 No. 4*) into weld nuts in bottom of oven.
4. Screw leg tops (*Fig. 1 No. 2*) into weld nuts by turning leg and top assemblies.
5. Raise shelf (*Fig. 1 No. 1*) to desired height and tighten set screws in shelf corners.

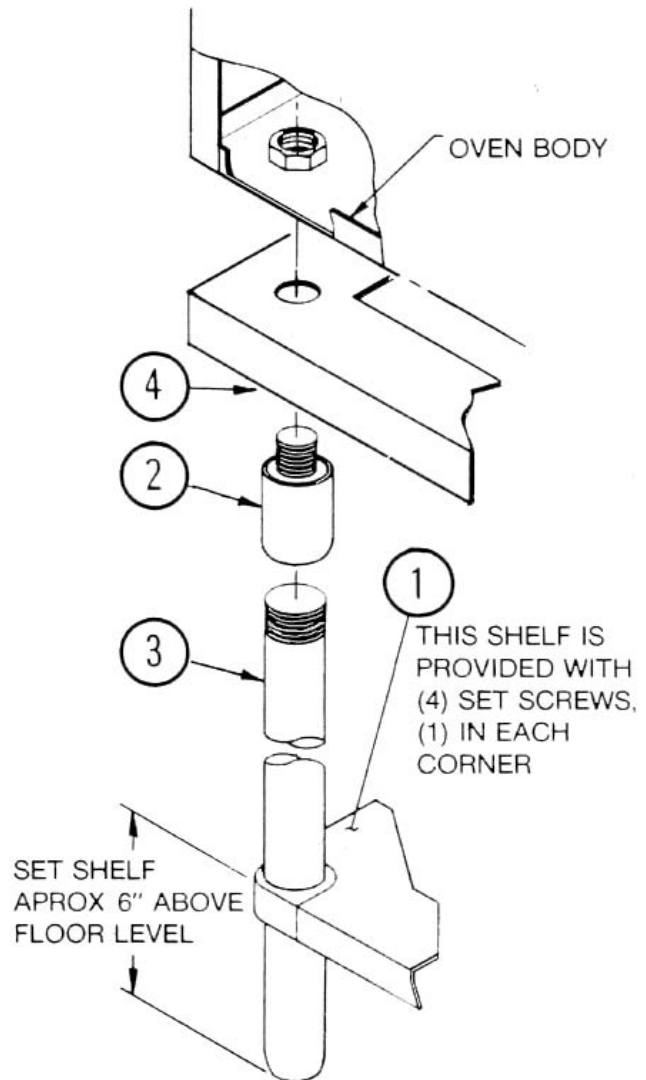


Fig. 1

ITEM	PART NO.	DESCRIPTION	QTY.
1	99-6180	SOLID SHELF ST/ST	1
2	A10-0635	LEG TOP	4
3	A10-0634	FLOOR LEG 28" HIGH	4
4	D99-6183	SHELF	1

INSTALLATION

Stacked Ovens on 18" Legs with Shelf

STACKING INSTRUCTIONS:

1. Fasten Item No. 1, stacking channel, to the bottom left side of top oven. Note - left channel has (2) holes. Use nut & washer (Item 3 & 4) front & rear.
2. Remove access panel from the right side of both ovens.
3. Remove knockouts from the top of the bottom oven and from the bottom of the top oven.
4. Place upper oven on top of lower oven with the right side stacking channel placed between. Line up holes in both ovens with the holes in the channel.
5. Fasten ovens together with the washer (Item No. 4) and the bolt (Item No. 11) Inserted up thru top of lower oven, thru stacking channel and into bottom of upper oven, using the existing weld nut to fasten the rear and the nut provided with the stacking kit (Item No. 5) to fasten the front.

ELECTRICAL CONNECTION:

1. Read data plate located on top surface of right side of bottom trim just below control panel before connecting electrical supply to oven. Make sure electrical supply is the same voltage, phase, and frequency called for on data plate.
2. All ovens are shipped three phase and may be converted to single phase as per alternate single phase wiring diagram.
3. Feed supply through opening in rear of oven (Fig. 2-1 No. 2) and connect supply wires to terminal block behind control panel.
4. Wiring diagram label is located on control bracket, accessible by opening control panel.

NOTE: Improper connection to power supply or connection to power supply other than that designated on data plate will void the warranty.

Assemble stand, as shown, before stacking ovens.

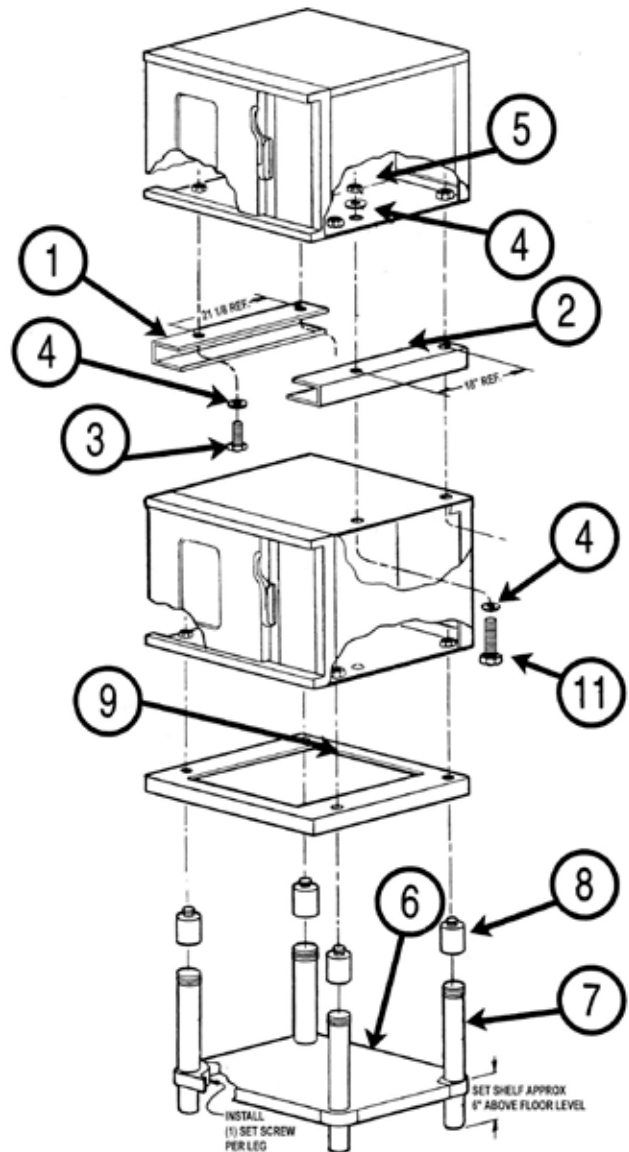


Fig. 2

ITEM	PART NO.	DESCRIPTION	QTY.
1	B99-6203	Stacking Channel Left	1
2	B99-6204	Stacking Channel Right	1
3	10-2564	Hex Bolt $\frac{3}{4}$ -10 x $1\frac{1}{2}$ Lg.	2
4	10-2411	Plain Washer - $\frac{3}{4}$	5
5	10-2320	Nut, Hex - $\frac{3}{4}$ -10	1
6	99-6180	Solid Shelf	1
7	A09-5271	Floor Leg 18" High	4
8	A10-0635	Leg Top	4
9	D99-6183	Shelf	1
10	A25-3263	Set Screw & Wrench Kit	1
11	08-3426	Hex Bolt $\frac{3}{4}$ -10 x 4 Lg.	2

INSTALLATION

OVEN CHECKOUT & ADJUSTMENTS:

Door Adjustment (Old Style):

The door was properly adjusted at the factory, if door does not open or close properly adjust the ball plunger catch as follows:

1. Remove adjusting wrench from back of manual and insert in notches on sides of ball plunger.
2. Loosen jam nut with wrench.
3. Turn adjusting wrench left or right until ball plunger engages in door striker plate for best operation.
4. Tighten jam nut with wrench while adjusting wrench is still engaged in notches.
5. Return adjusting wrench to back of manual.

THERMOSTAT CALIBRATION

(OLD STYLE):

The thermostat is a device which automatically limits heat input at or below the dial setting.

Before attempting to calibrate thermostat, make sure that the thermostat is the cause of problems experienced. Check for improper electrical service, incorrect mixes over and under proofing, incorrect temperatures, and warping pans. Thermostats are calibrated and sealed by the original manufacturer before leaving their plant. Only a qualified service person should make calibration adjustments, if they become necessary.

CALIBRATE ELECTRONIC THERMOSTAT (NEW STYLE):

1. Set oven thermostat knob at 350°F.
2. Allow oven to preheat to 350°F.
3. Observe temperature with digital thermometer.
4. If temperature goes above 350°F turn set pot labelled HI (on circuit board) counter-clockwise. ¼ turn should be sufficient.
5. Allow time for oven temperature to drop, then recheck temperature.
6. If temperature is below 350°F turn set pot labelled HI (on circuit board) clockwise. +/- 5°F turn should be sufficient.

7. Repeat steps 4 to 7 until oven temperature stabilizes at 350°F +/- 5°F
8. Apply Glyptol or Duco Cement to set pot to prevent rotation.

THERMOSTAT DIAL PLATE CALIBRATION (NEW STYLE):

1. Clamp thermocouple sensor in the center of the middle rack in compartment.
2. Pass the thermocouple sensor wire through the door gasket and close the door.
3. Plug the sensor lead into the pyrometer.
4. Set the oven power switch to ON.
5. Set the thermostat knob to 3500 (191°C).
6. Allow the oven to warm up for a minimum of (3) three ON/OFF cycles.

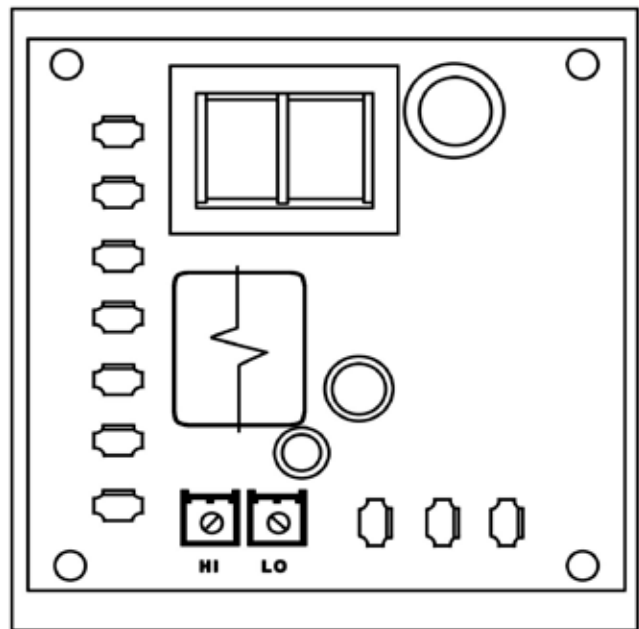
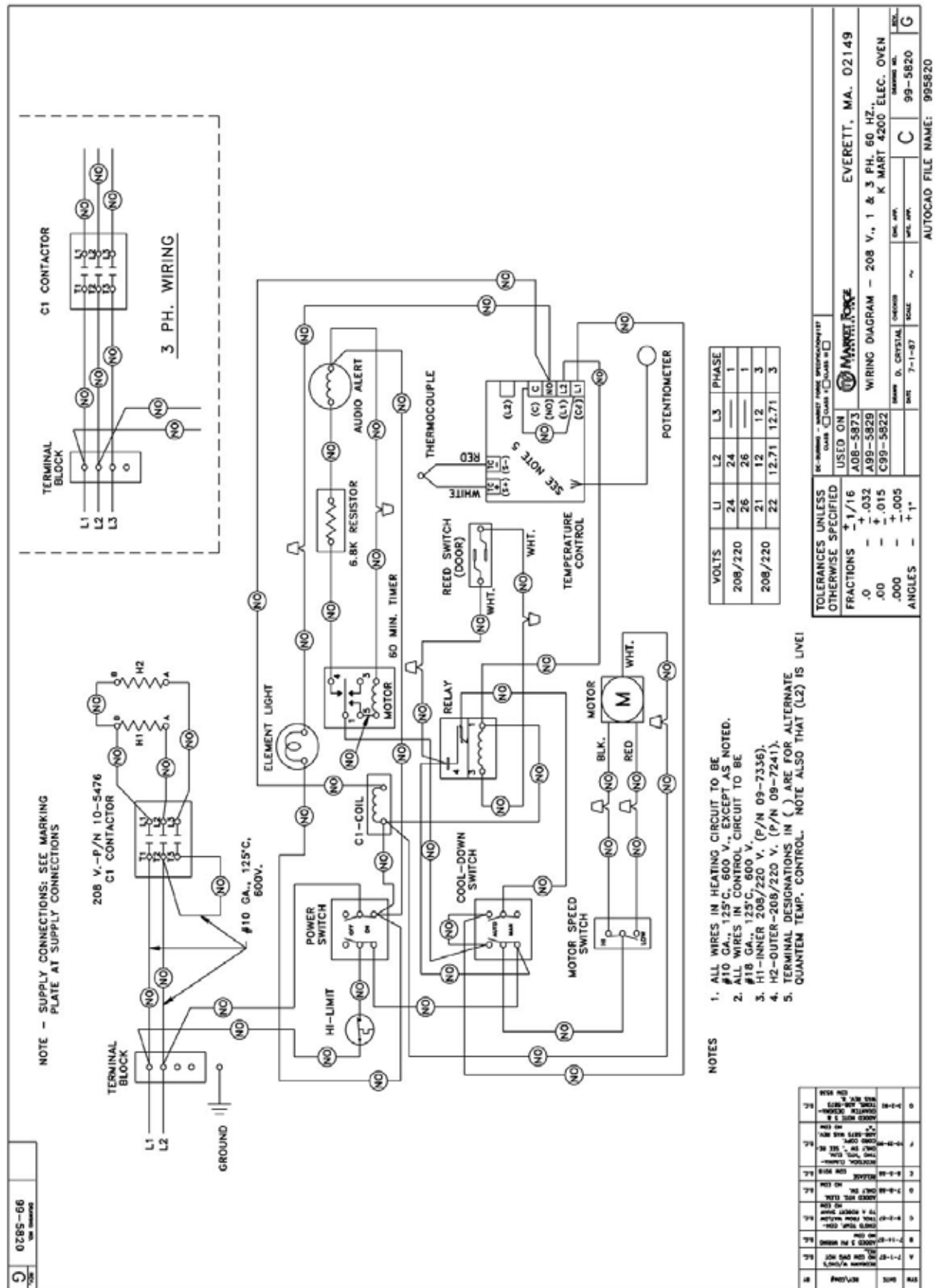


Fig. 3

7. Record the temperature when the element indicator light goes off. If a temperature of 345°-355° is attained, no calibration is necessary.
8. If the temperature differs more than +/- 5°F from the dial setting:
 - Pencil mark the knob pointer position as a reference point on the control panel next to the dial plate
 - Loosen the dial plate mounting screws only enough to move the plate.
 - Move the dial plate until calibration matches thermometer reading (350°F).

5



OPERATION

PRINCIPLES OF OPERATION:

Uniform distribution of heat within the oven is assured by continuous operation of a convector blower. Moving air continuously strips away a thin layer of moisture and cold air from the top of the food allowing more rapid heat penetration. Lower temperatures and shorter times than those used in conventional deck ovens 'Can be used. In general, temperature settings can be reduced by 50°F (28°C) from recipe temperatures for conventional ovens. Some products may require slightly higher or lower temperatures. Product should be checked for doneness in about half the time it would take in a conventional oven. Time savings may be about 15% to 20%.

CONTROLS:

All controls for the Model 4200 oven are located on the control panel on the front of the oven (Fig. 5). These controls are; a thermostat to control oven temperature (Fig. 5 No. 1), an Elements On indicator light (Fig. 5 No. 2), a power switch with ON and OFF positions (Fig. 5 No. 3), a blower switch with high and low positions (Fig. 5 No. 4), a cool down switch with manual and auto positions (Fig. 5 No. 5) and a 60 minute electro-mechanical timer (Fig. 5 No. 6). Heating Elements Only Switch (Fig. 5 Not Shown).

PRE-HEATING:

1. Set thermostat to desired temperature, set blower switch to desired speed, and turn on power switch. Blower wheel should rotate clockwise when viewed from front of oven. Low speed is suggested for fragile products *ie* those leavened by beaten egg whites such as souffles, angel food cake and popovers.
2. Indicator light will go out when desired temperature is reached. Oven will pre-heat to 350°F 180°C in about 10 minutes. Large differences in time from this indicate faulty heating elements, or connection to wrong electric power supply.

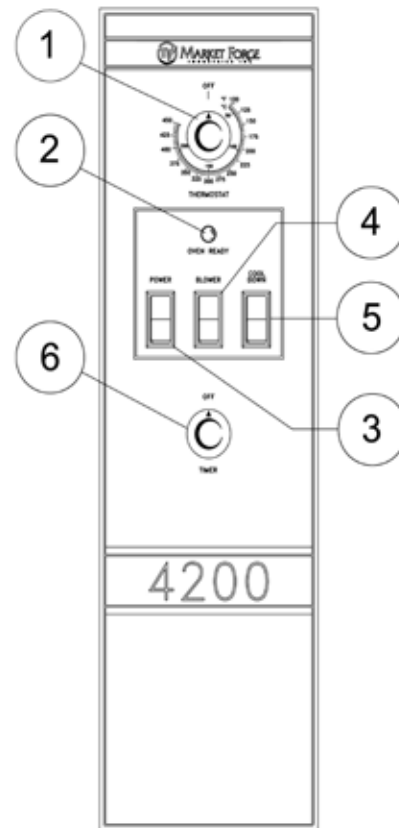


Fig. 5

OPERATION:

1. Set temperature about 50°F (28°C) less than what recipe calls for when using standard oven.
2. Load pans evenly on shelves making sure pans don't touch sides of oven or other pans.
3. Check food for doneness in about half the time it would take in a conventional deck oven. Visual inspection of food can be made without opening the door by looking through tempered glass window.
4. Blower will automatically shut off by a door interlock switch when door opens. Closing the door will restart the blower.
5. Blower may be operated with door open by placing cool down switch in manual position. No power is supplied to heating elements with cool down switch in manual position, allowing rapid lowering of oven temperatures with door open.
6. Heating elements only without blower fan when door is shut. (For delicate products)

MAINTENANCE

WARNING:
**DO NOT HOSE DOWN UNIT AS IT
CONTAINS ELECTRICAL COMPONENTS.**

CLEANING:

1. Clean interior of oven with a commercially available oven cleaner suitable for use on porcelain.
2. Racks, rack supports, and blower wheel may be cleaned by soaking in ammonia and water solution after removing them from oven.
3. Stainless steel parts may be cleaned using a commercially available stainless steel cleaner.

REMOVAL & REPLACEMENT OF PARTS:

WARNING: Disconnect oven from main power supply before working on oven.

DOOR REMOVAL:

1. Remove lower screw (Fig. 6, #1) from upper hinge assembly of door.
2. Loosen top screw (Fig. 6, #2) from upper assembly.
3. Push upper hinge pin (Fig. 6, #3) into door.
4. Rotate top of door forward to clear upper frame.
5. Pull up and out on door to remove.

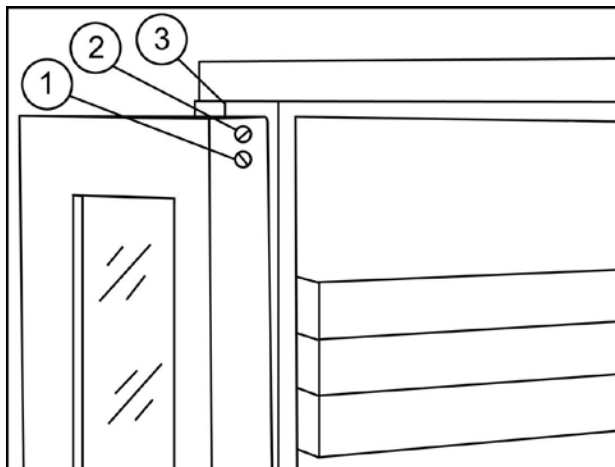


Fig.6

DOOR REPLACEMENT (OLD STYLE):

Reverse above procedure being sure to put as many washers under as there were before removal.

OVEN LINER GASKET REMOVAL:

1. Remove all screws from gaskets.
2. Remove all gaskets.

GASKET REPLACEMENT:

1. Replace top and bottom metal gaskets on front of oven liner and screw in place.
2. Replace left and right side metal gaskets and screw in place.

BLOWER WHEEL REMOVAL:

1. Shut off main power supply.
2. Remove baffle by placing hand under back end and rotating baffle up and out.
3. Loosen set screws located in the center of the blower wheel on the wheel hub.
4. Pull blower wheel off of shaft.

BLOWER WHEEL REPLACEMENT:

1. Remove metal burrs and foreign matter from motor shaft with emery cloth or sandpaper.
2. Lubricate blower wheel hub with high graphite grease. (Remove blower and lubricate at least once every six months).
3. Place blower wheel on shaft. Make sure set screws are positioned over the flats on the shaft. Make sure there is 3/16" clearance between blower wheel and oven wall.
4. Tighten set screws to 160 in-lbs torque.

MOTOR REMOVAL:

1. Make sure main power supply is disconnected from oven.
2. Remove baffle and blower wheel.
3. Remove right side panel.
4. Open control compartment cover.
5. Remove motor bolt access plate.
6. Remove four nuts and bolts holding motor to motor mount.
7. Remove cover from wiring box mount on motor and disconnect wires.

MAINTENANCE

MOTOR REPLACEMENT:

1. Reverse procedure above.
2. Check motor wiring to make sure blower turns clockwise when seen from front of oven.

SWITCH REMOVAL:

1. Make sure power supply to oven is off.
2. Open control compartment cover.
3. Disconnect wire to switch.
4. Depress spring clips on switch and push forward.

SWITCH REPLACEMENT:

1. Push switch into proper control panel opening until spring clips catch.
2. Reconnect wire to switch.
3. Close control cover.

CONTACTOR REMOVAL:

1. Make sure power supply to oven is off.
2. Open control compartment cover.
3. Disconnect wire from appropriate component.
4. Unscrew fasteners of appropriate components and remove.

CONTACTOR REPLACEMENT:

1. Attach components to mounting.
2. Replace and tighten fasteners.
3. Reconnect wires.

THERMOSTAT REMOVAL:

1. Make sure power supply to oven is off.
2. Open control compartment cover.
3. Remove racks and rack supports from oven compartment.
4. Remove baffle.
5. Disconnect thermocouple lead wires from circuit board.
6. Unscrew thermocouple from oven liner.
7. Pull thermocouple and wires through oven liner into oven compartment and remove.
8. Remove circuit board from bracket.

THERMOSTAT REPLACEMENT:

Follow Thermostat Removal in reverse order.

HEATER ELEMENT REMOVAL:

1. Make sure power supply to oven is off.
2. Remove right side panel.
3. Remove element terminal cover above motor and disconnect wires.
4. Remove element plate and insulation spacer.
5. Remove racks and rack supports from oven cavity.
6. Remove baffle.
7. Remove eight screws holding element assembly to the oven wall.
8. Remove elements.

ELEMENT REPLACEMENT:

Follow Element Removal in reverse order.

DOOR INTERLOCK SWITCH BRACKET REMOVAL (OLD STYLE):

Make sure power supply to oven is off.
Open control compartment cover.
Remove wires to door interlock switches.
Remove two bracket retaining screws.
Remove interlock switch assembly.

DOOR INTERLOCK SWITCH BRACKET REPLACEMENT (OLD STYLE):

1. Insert long end of door activated plunger through hole in left front side of control compartment.
2. Replace spring and switches in bracket and secure switch assembly with two screws.
3. Position switches so that push buttons on switches just touch actuator plate on plunger rod.
4. Replace wires using wiring diagram as guide.
5. Replace control compartment cover.

MAINTENANCE

NEW STYLE INTERLOCK SWITCH

REMOVAL:

1. Make sure power supply to oven is off.
2. Remove lower bottom trim, remove screws on end.
3. Remove screws from switch, to remove switch.
4. Remove marr connectors from leads, then remove switch.

REPLACEMENT OF SWITCH:

Follow New Style Interlock Switch Removal in reverse order.

HI-LIMIT REMOVAL:

1. Make sure power supply to oven is off.
2. Open oven door.
3. Remove all shelves and rack supports.
4. Remove baffle from right side.
5. Unscrew fasteners from Hi-Limit on liner wall and pull out.
6. Remove wire leads from Hi-Limit.

HI-LIMIT REPLACEMENT:

Follow Hi-Limit Removal in reverse order.

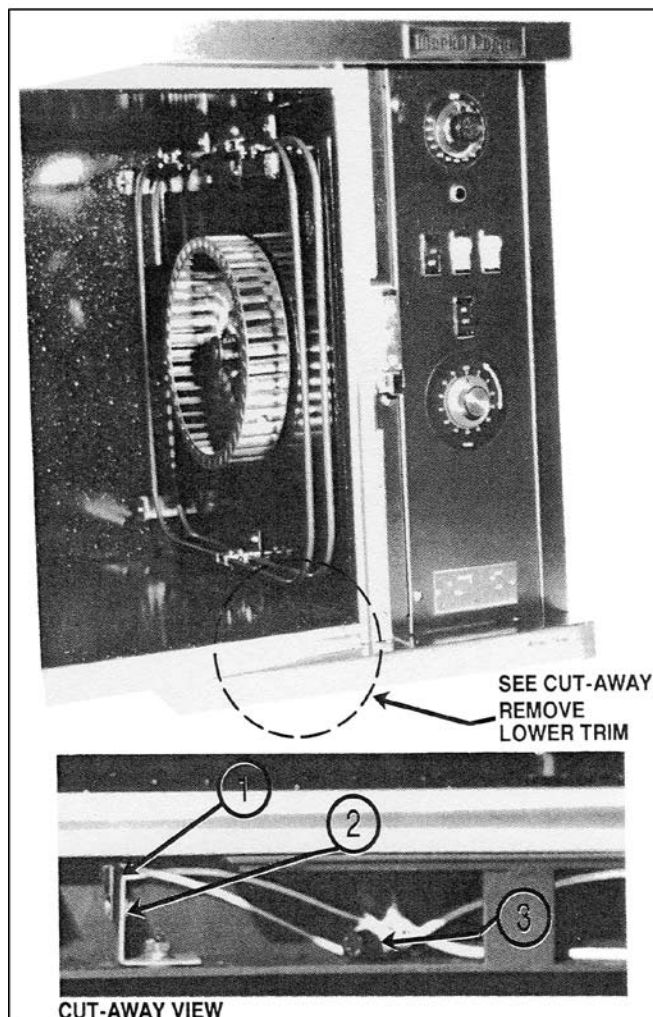


Fig. 7

NEW STYLE INTERLOCK LOCATION

ITEM	PART NO.	DESCRIPTION
1	08-6308	Reed switch (fan interlock)
2	99-6168	Reed switch mounting bracket
3	REF.	Marr connectors, two

TROUBLE-SHOOTING

GENERAL:

The information in this section is intended to assist both the operator and service personnel in locating the general source of problems which may occur with the model 4200 compact convection oven. Before following any of the procedures given in this section, the op-

erator should be thoroughly familiar with the operating instructions and the function of all controls described on page 6 of this manual. If the problem cannot be readily corrected, the operator should contact the nearest Authorized Market Forge Service Agency for assistance.

TROUBLE-SHOOTING GUIDE:

PROBABLE CAUSE	REMEDY
1. Convector fan fails to operate.	
a. Power to oven is off. b. ON-OFF switch off. c. Oven door open. d. Faulty cool down switch ON-OFF switch, door switch, fan motor, wiring.	a. Locate external circuit breakers for power and place in ON position. b. Place in ON position. c. Close door. d. Test each component and connecting wire, replace as required.
2. Oven will not heat with thermostat at maximum setting, fan operating.	
a. Faulty thermostat wiring. b. Thermostat contacts or coil faulty.	a. Test thermostat and connecting wiring. Replace as required. b. Replace thermostat.
3. Indicator light fails to light with thermostat set, fan operating, oven hot.	
a. Indicator light burned out. b. Faulty wiring.	a. Replace light. b. Check wiring and repair as needed.
4. Erratic oven temperature.	
a. Faulty thermostat operation.	a. Recalibrate or replace as required.
5. Uneven heating.	
a. One or more heating elements inoperative.	a. Check wiring to elements; check for burned out elements. Replace as required.

WE RECOMMEND THAT SERVICE BE PERFORMED BY A QUALIFIED MARKET FORGE AUTHORIZED SERVICER. SERVICE PERFORMED BY OTHERS WILL VOID WARRANTY. MARKET FORGE IS NOT RESPONSIBLE FOR REPAIRS MADE BY OTHER THAN AUTHORIZED SERVICE AGENTS.

TROUBLE-SHOOTING

WIRING:

All the electrical components of the model 4200 (ON-OFF switch, door switch, thermostat control, contactors, fan motor, and indicator light) are connected to each other by wiring shown on page 5. If all the electrical components are operating correctly and the incoming power has been checked, but the unit fails to operate, the fault lies in the wiring.

Using an ohmmeter, wiring continuity between the connections, shown in the wiring diagram is readily verified. This is best done in stages, removing only those wires required for each continuity check. As each lead is replaced, it should be checked for evidence of corrosion and cleaned if necessary. All leads must be tightly attached to provide a good electrical connection.

ELECTRICAL FAULT ISOLATION GUIDE

FAILURE	FAULT LOCATION
1. Oven will not operate when the thermostat is set.	a. Incoming power b. Door switch c. Thermostat control d. ON-OFF switch e. Cool down switch f. Contactor g. Wiring
2. Intermittent operation of heaters.	a. Thermostat control b. Contactor coil c. Wiring
3. Convectector fan fails to operate.	a. Cool down switch b. ON-OFF switch c. Door Switch d. Fan motor e. Wiring
4. Indicator light off, heater under power.	a. Indicator light b. Wiring
5. Uneven heating.	a. Heating elements b. Wiring
6. (Elements Only) fails to come on.	a. Check switch b. Check hi-limit switch c. Check wiring

WE RECOMMEND THAT SERVICE BE PREFORMED BY A QUALIFIED MARKET FORGE AUTHORIZED SERVICER. SERVICE PERFORMED BY OTHERS WILL VOID WARRANTY. MARKET FORGE IS NOT RESPONSIBLE FOR REPAIRS MADE BY OTHER THAN AUTHORIZED SERVICE AGENTS.

TROUBLE-SHOOTING

ELECTRICAL CONNECTIONS

CONTROL BOARD:

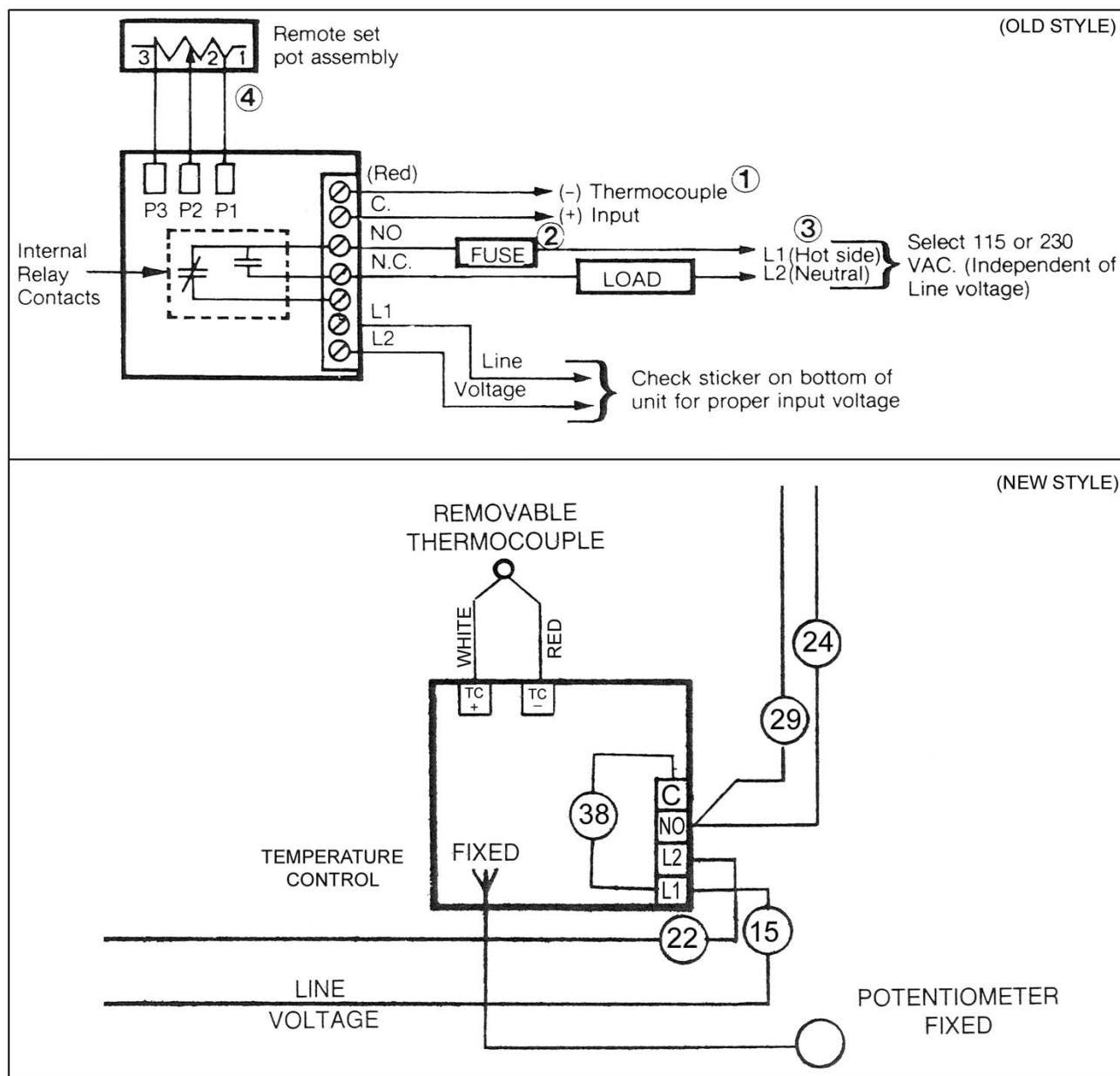


Fig. 8

NOTE: New style board CANNOT BE CALIBRATED. Check thermocouple for fault in temperature control. If thermocouple is good, replace temperature control board.

ILLUSTRATED PARTS LIST

GENERAL:

This section contains a complete listing of all replaceable parts for the 4200 compact convection oven. For the purpose of parts identification, the unit is broken down into functional assemblies, and each assembly is shown in a pictorial view which is keyed to the accompanying part list. Each parts list contains the figure item number, the Market Forge part number and an abbreviated description.

ORDERING INFORMATION:

Orders for repair parts should be directed to the nearest authorized parts distributor. For a current Market Forge Authorized Parts and Service Distributor list go to our web site or contact:

Market Forge Industries Inc.

Toll Free: (866) 698-3188

www.mfii.com

Parts, Service and Availability Toll Free No.:
(888) 259-7076

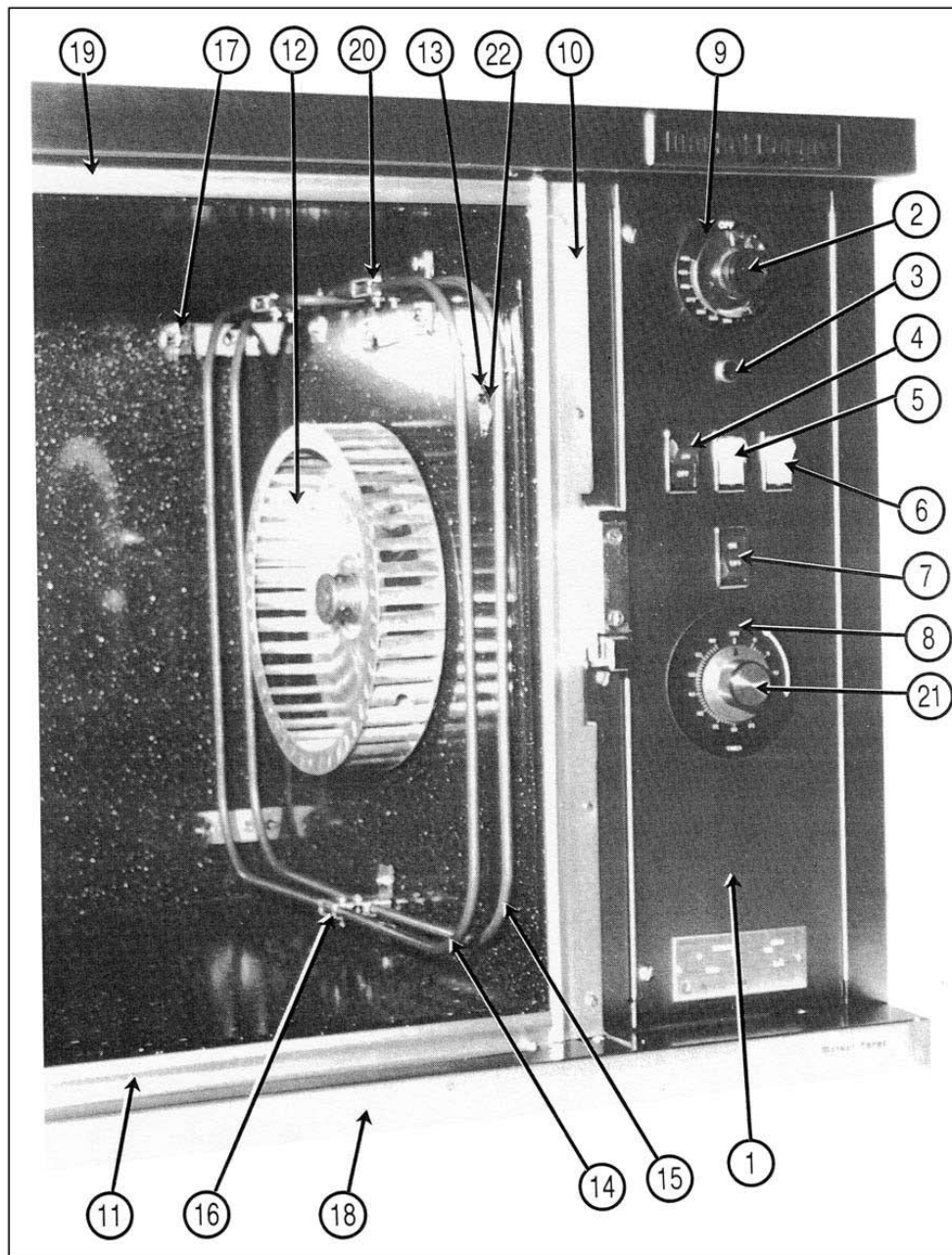


Fig. 9

ILLUSTRATED PARTS LIST

Fig. 9 4200 Compact Convection Oven

ITEM NO.	PART NO.	DESCRIPTION
1	99-5826	CONTROL PANEL K-MART ONLY
2	09-5268	THERMOSTAT KNOB
3	09-6440	RED PILOT 250V
4	09-7231	SWITCH DPDT 250V, 10 AMP, RED, ON-OFF SWITCH
5	09-7244	SWITCH DPDT 250V, 10 AMP, BLUE, BLOWER SWITCH
6	09-7235	SWITCH DPDT 250V, 10 AMP, WHITE, COOL DOWN SWITCH
7	09-7231	SWITCH DPDT 250V, 10 AMP, RED, HEATING ELEMENTS ONLY
8	08-5839	THERMOSTAT DECAL
9	99-5830	TIMER DECAL
10	99-6136	SIDE GASKET
11	99-6101	TOP AND BOTTOM GASKET
12	09-5269	BLOWER WHEEL
13	09-7259	THERMOCOUPLE AND WASHER
14	09-7241	HEATING ELEMENT, OUTER, 280V-2500W, 220V-2800W (EXPORT)
14A	09-7242	HEATING ELEMENT, OUTER, 230V-2571W, 240V-2800W
15	097336	HEATING ELEMENT, INNER, 280V-2500W, 220V-2800W
15A	09-7337	HEATING ELEMENT, INNER, 230V-2571W, 240V-2800W
16	99-6102	HEATING ELEMENT BRACKET
17	99-6130	BAFFLE SUPPORT
18	99-5054	BOTTOM TRIM
19	99-5055	TOP TRIM
20	99-6107	OVEN INTERIOR COVER PLATE
21	09-5267	60 MINUTE TIMER KNOB
22	08-6351	HI-LIMIT THERMOSTAT

ILLUSTRATED PARTS LIST

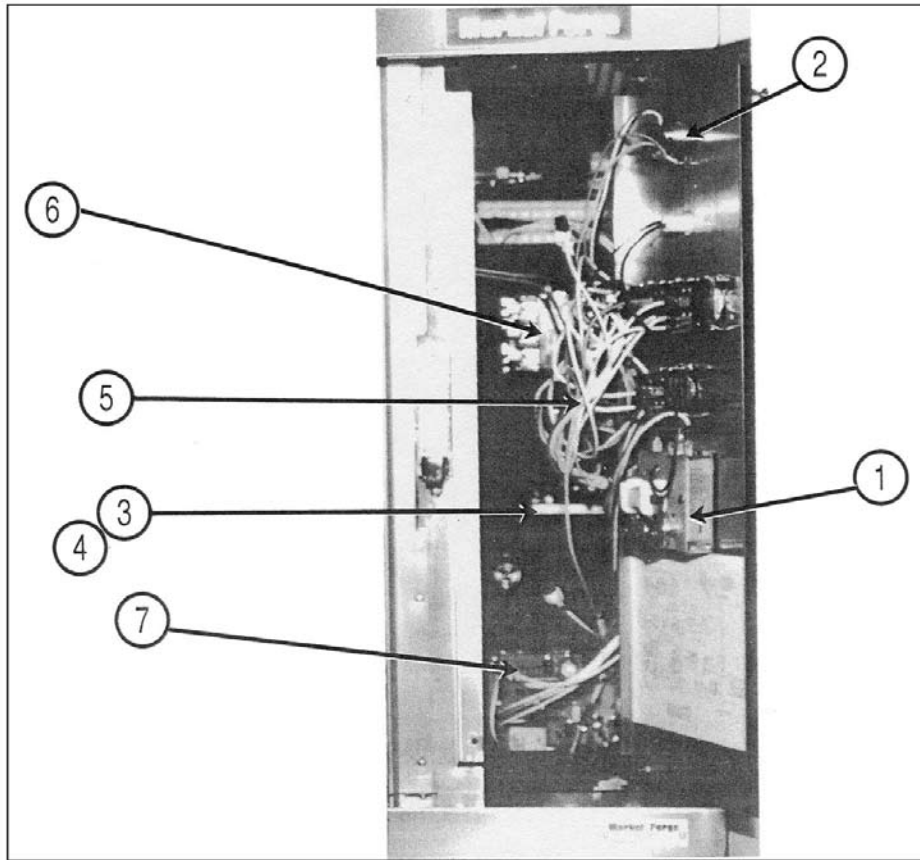


Fig. 10

Fig. 10 Control Panel, Open

ITEM NO.	PART NO.	DESCRIPTION
1	10-6293	60 MINUTE TIMER, 240V, 50/60 HZ
2	REF.	REMOTE POTENTIOMETER, PART OF THERMOSTAT 08-6355
3	10-6649	TERMINAL BLOCK
4	10-5551	GROUND LUG
5	99-5822	CONTROL CIRCUIT WIRE HARNESS
6	10-5476	CONTACTOR, 280V, 40 AMP, 50/60 HZ
6A	10-5943	CONTACTOR, 240V, 40 AMP, 50/60 HZ
7	08-6355	TEMPERATURE CONTROLLER, 208 OR 240V

ILLUSTRATED PARTS LIST

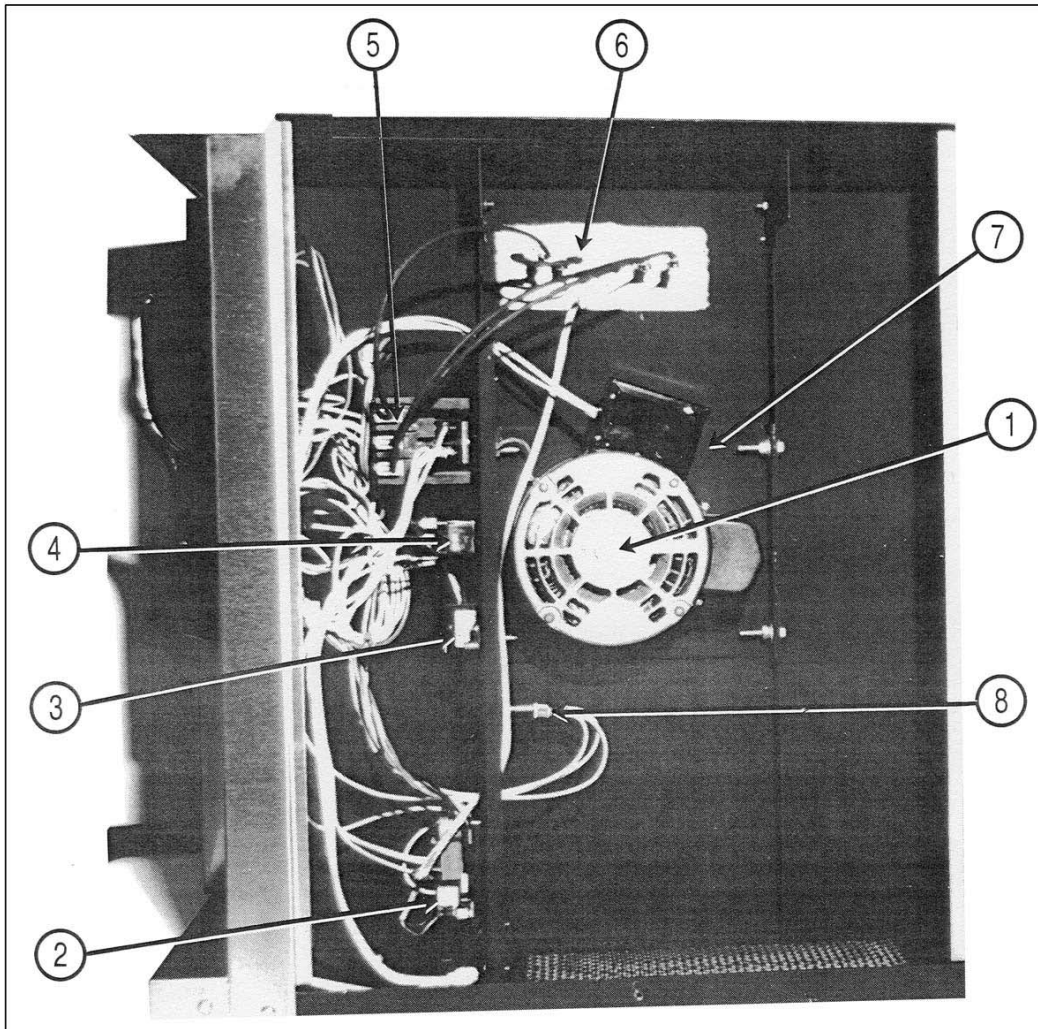


Fig. 11

Fig. 11 Right Side View

ITEM NO.	PART NO.	DESCRIPTION
1	09-7230	BLOWER MOTOR, 208/230V, 1/4 HP, 2 SPEED
2	REF.	TEMPERATURE CONTROLLER, 208-240V
3	REF.	TERMINAL BLOCK
4	10-6874	S.P.S.T. RELAY, FOR REED SWITCH, 240V
5	REF.	CONTACTOR, 208V, 40 AMP, 50/60 HZ
6	99-6108	HEATING ELEMENT COVER PLATE
6A	99-6109	HEATING ELEMENT COVER GASKET
7	99-6140	ASSEMBLY, BLOWER MOTOR AND BRACKET
8	09-6516	SIREN AUDIO ALERT, 120V
8A	09-6599	6.8 K CERAMIC RESISTOR FOR ALTER, NOT SHOWN

ILLUSTRATED PARTS LIST

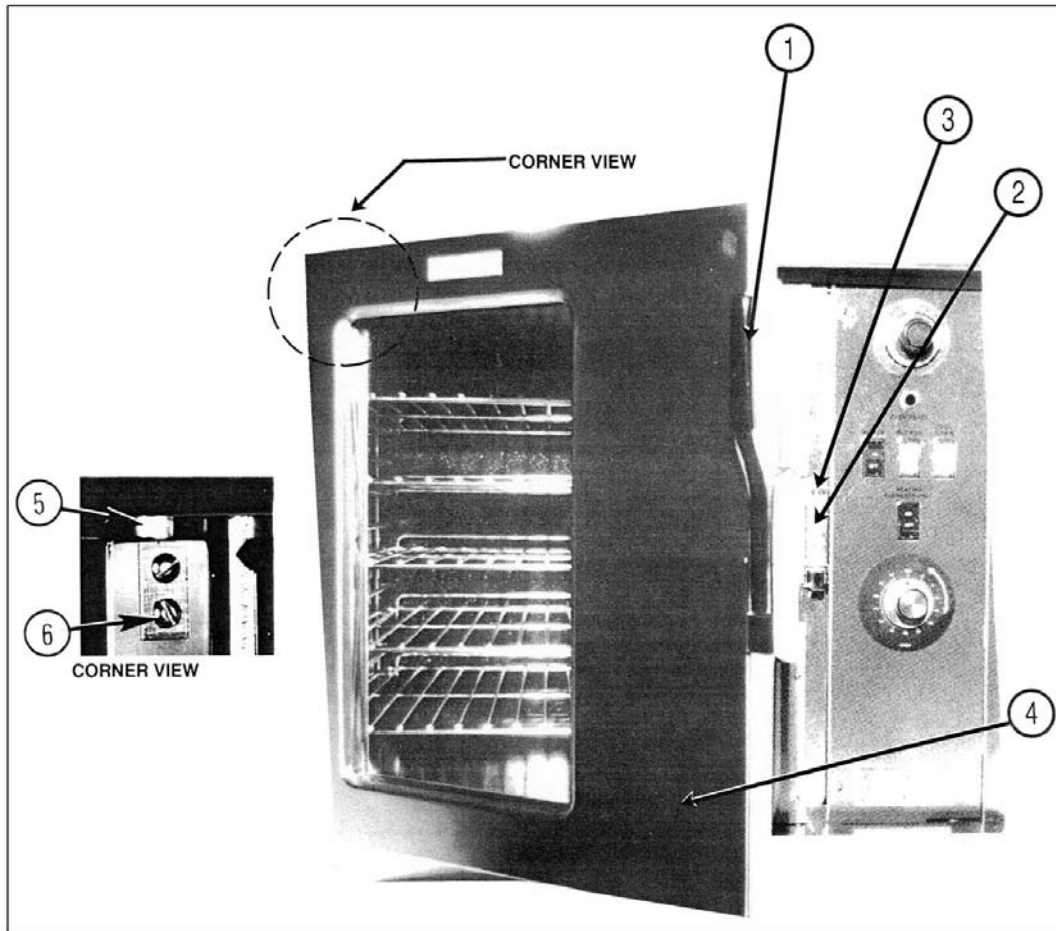


Fig. 12

Fig. 12 Door Assembly

ITEM NO.	PART NO.	DESCRIPTION
1	08-5205	DOOR HANDLE ASSEMBLY
2	REF.	CATCH, PART OF 08-5205
3	99-6115	SPACER CATCH
4	99-6170	DOOR ASSEMBLY
5	99-6153	HINGE PIN
6	99-6154	HINGE PIN PLATE

ILLUSTRATED PARTS LIST

INSIDE OVEN COMPARTMENT

PART NO.	DESCRIPTION
99-5027	BAFFLE
99-5057	RACK SUPPORTS
99-5056	RACKS
99-5052	EXTERIOR TOP PANEL
99-5058	EXTERIOR REAR PANEL
99-5020	RIGHT SIDE ACCESS PANEL
99-5035	LEFT SIDE PANEL
10-0633	4" ADJUSTABLE LEGS
99-6176	28" HIGH STAND
99-6177	18" STACKED KIT WITH STAND

4200/4292 REVERSING SWING OF DOOR (S):

1. Remove door handle, P/N 08-5205, by removing three slotted screws located on edge of handle.
2. Loosen two upper hinge pin screws. Pin will drop into door.
3. Remove door by tilting top of door outward while lifting door off of lower hinge pin.
4. Remove catch plate assembly from face of oven.
5. Remove four round head machine screws from opposite side of oven face.
6. Re-install on other side of oven face, the four round head machine screws removed in step 5.
7. Re-locate and install catch plate assembly at new location.
8. Hold door in new position and allow hinge pin to slide out. Tighten two screws to hold pin in this position.
9. Release the (new) top hinge pin and re-install door in the new position. Push up hinge pin and tighten two screws to hold upper hinge pin in place.
10. Replace handle using hardware removed in step 1.
11. Adjust door by resetting adjustment on catch plate assembly.

IMPORTANT NOTES FOR INSTALLATION AND OPERATION



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



WARNING: Improper installation, operation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing, operating or servicing this equipment.

This manual should be retained for future reference.

Intended for commercial use only. Not for household use.

Adequate clearances must be maintained for safe and proper operation.

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1.0 SERVICE CONNECTIONS

SERVICE CONNECTIONS

Electrically Operated

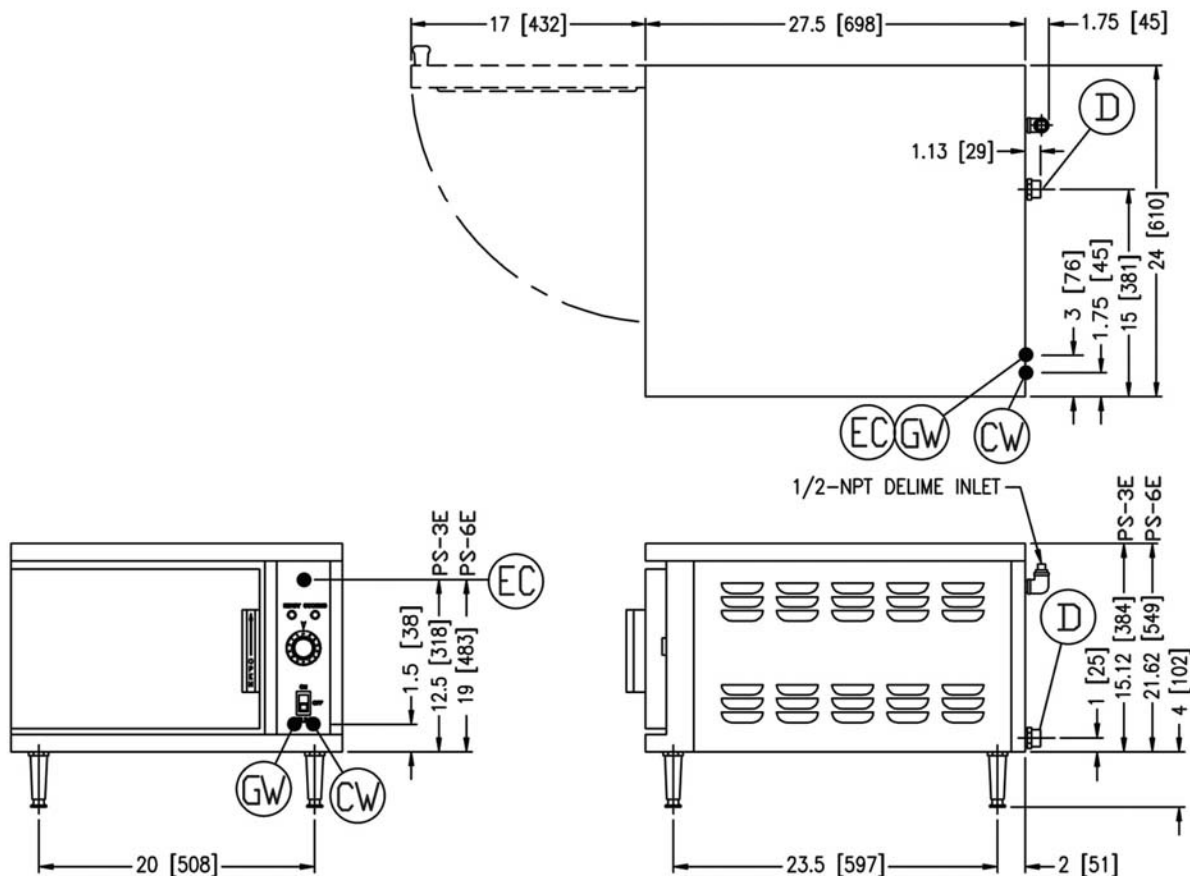
EC	Electrical Connection - $1\frac{1}{8}$ " (29mm) electric connection to controls.
D	Drain - 1" (25mm) IPS piped to open floor drain. NO SOLID CONNECTION TO FLOOR DRAIN. NO BENDS OR ELBOWS.
CW	Cold Water - $\frac{3}{8}$ " (10mm) OD tubing at 25-50 PSI.
GW	Generator Water - $\frac{3}{8}$ " (10mm) OD tubing at 25-50 PSI.

CAUTION:

Before connecting water to this unit, water supply should be analyzed to make sure hardness is no greater than 2.0 grains and pH level is within the range of 7.0-8.5. Water which fails to meet these standards should be treated by installation of water conditioner. **EQUIPMENT FAILURE CAUSED BY INADEQUATE WATER QUALITY IS NOT COVERED UNDER WARRANTY.**

PAN CAPACITIES				
Size	1"	2.5"	4"	6"
PS-3E	6	3	2	1
PS-6E	12	6	3	2

		AMP/PHASE								
MODEL	KW	SINGLE PHASE			THREE PHASE					
		208	220	240	208	240	380	415	480	600
PS-3E	10	48	46	42	28	24	16	14	12	10
PS-6E	15	72	69	63	42	36	23	21	18	15



*It is our policy to build equipment which is design certified by U.L., N.S.F. and C.S.A. However, a continuing program of product improvement makes it necessary to submit new models to the agencies as they are developed and consequently not all models bear the appropriate agency labels at all times.

2.0 INSTALLATION INSTRUCTIONS

GENERAL

The PS-3E and PS-6E steamers are single compartment electric pressureless steam cookers with an internal electric steam generator that maintains standby water temperature at approximately 205°F. PS-3E is rated 10 kW. PS-6E is rated 15 kW.

At high altitude locations a lower temperature is required to achieve atmospheric steaming. Contact your authorized service office to have the thermostat adjusted if the steamer will be operated at high altitudes.

UNPACKING

This steamer was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery. Immediately after unpacking the steamer, check for possible damage. If the steamer is found to be damaged after unpacking, save the packaging material and contact the carrier within 15 days of delivery.

Prior to installation, verify that the electrical service agrees with the specifications on the machine data plate which is located on the left side panel.

LOCATION

Allow space for plumbing and electrical connections. Minimum clearances are 0" on the sides and 6" (152 mm) on the back for proper air circulation. Allow adequate access for operating and servicing the steamer, 36" (915 mm) at the front of the steamer and 15" (381 mm) above the steamer.

LEVELLING FEET (Standard) OR 4" ADJUSTABLE LEGS (Optional)

Thread the four 2" levelling feet shipped in a bag inside the steamer cabinet into the threaded holes on the bottom corners of the steamer. Or, thread the four optional 4" adjustable legs into the threaded holes on the bottom corners of the steamer.

2.0 INSTALLATION INSTRUCTIONS (Continued)

LEVELLING

Using a spirit level or pan of water in the bottom of the steamer, adjust the levelling feet or the feet on the adjustable legs to level the steamer front-to-back and side-to-side. After the drain is connected, check for level by pouring water onto the floor of the compartment. All water should drain through the opening at the back of the compartment cavity.

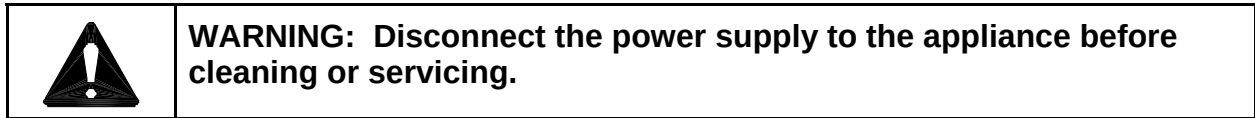
ANCHORING STEAMER (Without Legs)

1. Place steamer in the desired location on the levelled counter top and mark four corners. Remove the steamer and drill 1/2" holes as indicated in Figure 1.
2. Apply a bead of RTV or other equivalent sealant around bottom perimeter edge of the steamer. If anchoring the steamer, this bottom seal is necessary to meet NSF requirements.
3. Set steamer on counter and bolt down securely with 3/8 - 16 bolts (not supplied).

STACKING KIT

Follow instructions in the stacking kit when installing stacked convection steamers.

FIGURE 1



PLUMBING CONNECTIONS

WARNING: Plumbing connections must comply with applicable sanitary, safety, and plumbing codes.

2.0 INSTALLATION INSTRUCTIONS (Continued)

The water supply inlets are provided with 3/8" (10 mm) compression fittings for 3/8" O.D. copper tubing. The water supply line pressure should be 25-50 PSI ($1.8\text{-}3.5\text{ kg/cm}^2$) for each line. The water supply to the generator tank is separate from the water supply to the cooling system where steam is condensed before entering the drain line.

Install line strainers (not provided). A manual shutoff valve for each supply line must be provided convenient to the steamer.

We recommend treated water feeding the boiler inlet supply, and untreated water feeding the cooling system inlet. Hook-ups are labelled on the back of the steamer.

ADJUSTMENT FOR HIGH ALTITUDE LOCATIONS

The steamer has been factory set so that when it is ON, and during the READY phase, it will maintain water temperature in the steam generator tank at approximately 205°F (96°C) (just below water boiling point). However, for high altitude locations, an authorized service agency must adjust the steamer to achieve this temperature.

ADJUSTMENT FOR DRAIN WATER TEMPERATURE

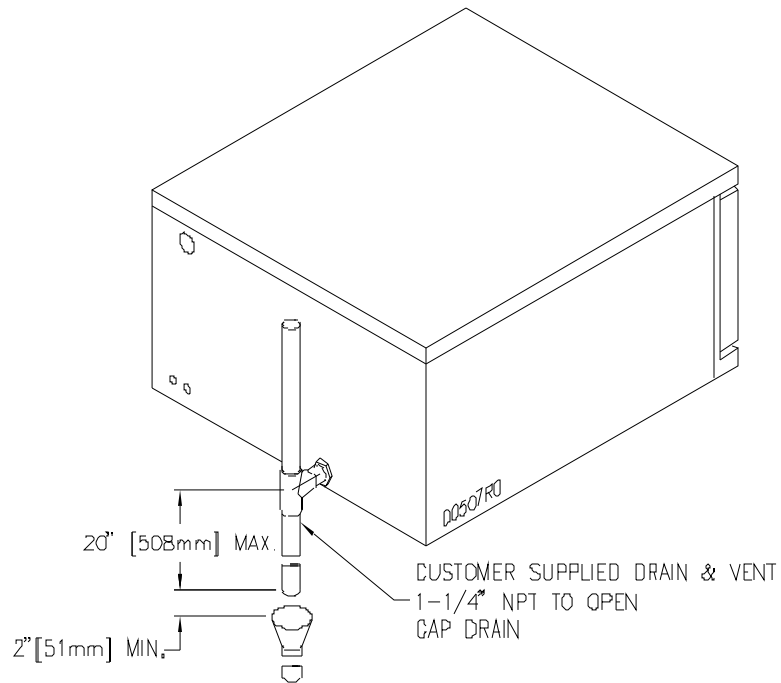
Cooling solenoid valves have been adjusted to yield drain temperatures of 140°F. This will vary depending on install location water supply temperature and pressure. A qualified service person should adjust the cooling solenoid valves should the drain temperature be other than desired. Refer to section 7.0 Service on page 26 for adjustment instructions.

DRAIN CONNECTIONS (FIGURE 2)

The drain connection (Fig. 2) must be 1" IPS down, preferably with one elbow only, maximum length of 6 feet and piped to an open air gap type drain. Use copper only.

2.0 INSTALLATION INSTRUCTIONS (Continued)

FIGURE 2



CAUTION: In order to avoid any backpressure in the steamer, do not connect solidly to any drain connection.

WATER QUALITY

The water supply connected to this steamer should contain no more than 2.0 grains of hardness per gallon with pH from 6.5 to 8.0. This degree of hardness and pH can easily be obtained with the use of a properly maintained water softener.

Water supplies vary from one location to another. A local water treatment specialist should be consulted before installing any steam generating equipment.

Untreated water contains scale producing minerals which can precipitate onto the surfaces in the boiler. Due to the temperatures in the boiler, the minerals can bake onto the surfaces and components. This can result in early component failure and reduced product life.

Mineral scale on components causes several problems:

1. The surfaces of the heating devices become coated with scale, reducing the heat transfer efficiency. This can produce hot spots on the heating elements and result in premature failure.
2. The water level probes become coated with scale. Scale will bridge across the probe insulator from the metal extension which senses the water level in the boiler. Once this scale becomes wet, the water level control is unable to maintain the proper water level in the boiler. This situation may cause an electric heating element to fail if the element is not adequately covered by water.

Strainers and filters will NOT remove minerals from the water.

Refer to REMOVAL OF LIME SCALE DEPOSITS, page 23.

VENT HOOD

Some local codes may require the steamer to be located under an exhaust hood. Information on the construction and installation of ventilating hoods may be obtained from Vapour Removal from Cooking Equipment, NFPA standard No. 96 (latest edition).

ELECTRICAL CONNECTIONS



WARNING: Disconnect electrical power supply and place a tag at the disconnect switch to indicate that you are working on the circuit.

Electrical grounding must be provided in accordance with local codes or in the absence of local codes, with the National Electrical Code, ANS/NFPA70, or the Canadian Electrical Code, CSA C22-2, as applicable.

Use copper wire suitable for at least 200°Fahrenheit (90°Celsius). The steamer must be grounded. The wiring diagram is located on the right side panel as you face the steamer.

TESTING PROCEDURES



CAUTION: Live steam and accumulated hot water in the compartment may be released when the door is opened.

Once the steamer is installed and all mechanical connections have been made, thoroughly test the steamer before operation.

1. Check that proper water, drain and electrical connections have been made.
2. Turn main power switch ON. After approximately 15 minutes, the READY light should come on, indicating that the water temperature is 205°Fahrenheit.
3. When the READY light comes on, set timer to the "5 minute" position. With door open, observe that no steam is entering the compartment and that the COOKING light is OFF.
4. Close compartment door. The COOKING light should now be illuminated and steam should be heard entering the compartment after about 45 seconds.
5. Check drain line to ensure that water from cold water condenser is flowing through the drain line.
6. Open compartment door and observe that steam supply to chamber is cut off. (READY light should again come on as COOKING light goes off.)
7. Close compartment door and let cooking cycle finish. When the timer returns to "0" position, a buzzer will sound signalling the end of the cooking cycle. Buzzer must be manually turned off by setting the timer to its OFF position.
8. To shut down steamer, turn main power switch OFF and leave compartment door slightly open.

3.0 OPERATION

	CAUTION: Live steam and accumulated hot water in the compartment may be released when the door is opened.
---	--

	CAUTION: An obstructed drain can cause personal injury or property damage.
---	---

CONTROLS

Main Power Switch

- | | | |
|--------|---|---|
| ON | - | The boiler will automatically fill and begin heating to the preset standby temperature. |
| OFF | - | The boiler will drain. |
| DELIME | - | Closes the drain valve while CLR liquid is being poured into the generator during the delime procedure. |

- | | | |
|--------------------|---|---|
| Ready Light | - | Indicates the temperature has reached 205°F and that the steamer is ready to begin cooking. |
|--------------------|---|---|

- | | | |
|----------------------|---|--|
| Cooking Light | - | Indicates that a cooking cycle is in progress. |
|----------------------|---|--|

- | | | |
|--------------|---|---|
| Timer | - | Set the cooking time (0 to 60 minutes) or constant steam. Steam cooking will begin when the door is closed. The cooking cycle will be interrupted if the door is opened during the cooking cycle; resume cooking by closing the door. |
|--------------|---|---|

When done, a buzzer sounds and steam supply to the cooking chamber will cease. Turn the timer OFF to stop the buzzer.

3.0 OPERATION (Continued)

BEFORE FIRST USE

Clean the protective oils from all surfaces of the steamer. Use a non-corrosive, grease dissolving commercial cleaner, following manufacturer's directions. Rinse thoroughly and wipe dry with a soft clean cloth.

PREHEAT

Turn the main power switch ON. When the READY light comes on, set the timer to 1 minute to preheat the compartment. This should be done when the steamer is first used for the day or whenever the chamber is cold. The door should be closed during the preheat cycle. The COOKING light will be lit. When the buzzer sounds, set the timer to the OFF position. The steamer is now ready to cook.

COOK

With compartment preheated and READY light ON, place pans of food into the compartment and close the door.

Set timer to desired cooking time. (The cooking cycle may be interrupted at any time by opening the door. To resume operation, close the door.) Steam will flow into the compartment and the COOKING light will be lit.

At the end of the cooking cycle, the buzzer will sound, the COOKING light will go off and steam supply to the compartment will cease. Turn the timer to the OFF position to silence the buzzer.

SHUTDOWN

Turn main power switch OFF. The boiler will automatically blow down. Leave the compartment door open to allow the inside to dry out. For an extended shutdown, turn the main power switch OFF; turn power and water supply OFF.

3.0 OPERATION (Continued)

CONSTANT STEAM COOKING - This mode will give continuous steam to the cooking chamber until the operator either turns the timer to the “OFF” position, or turns power OFF to the steamer.

When cooking is complete, or not in use, the constant steam cooking feature should be shut off. This prevents the boiler from running unnecessarily. This will help conserve water, and will reduce boiler maintenance.

SHUT DOWN

Turn the timer to OFF. Turn main power switch to the “OFF” position.

DRAINING THE BOILER

Drain the boiler after each day's use to flush out minerals and minimize scale build-up. The boiler drains automatically for approximately 4 - 6 minutes after the main power switch is turned off.

Each compartment is equipped with a removable drain screen. Frequently check the drain screen for accumulation of food particles. Should food particles accumulate against, or clog the drain screen, remove it, clean it thoroughly and then replace it in its original position.

Frequently check that the compartment drain and plumbing is free of all obstructions. Never place food containers, food or food portion bags in the cooking compartment in such a way that the compartment drain becomes obstructed.

3.0 OPERATION (Continued)

STEAM COOKING

Your steamer efficiently cooks vegetables or other foods for immediate serving. Steam cooking should be carefully time controlled. Keep hot-food-holding-time to a minimum to produce the most appetizing results. Prepare small batches, cook only enough to start serving, then cook additional amounts to meet demand. Separate frozen foods into smaller pieces to allow more efficient cooking.

Use a pan cover for precooked frozen dishes that cannot be cooked in the covered containers in which they are packed if they require more than 15 minutes of cooking time. When a cover is used, approximately one-third additional cooking time is necessary.

Cooking time for frozen foods depends on amount of defrosting required. If time permits, allow frozen foods to partially thaw overnight in a refrigerator. This will reduce their cooking time.

PREPARATION

Prepare vegetables, fruits, meats, seafood and poultry normally by cleaning, separating, cutting, removing stems, etc. Cook root vegetables in a perforated pan unless juices are being saved. Liquids may be collected in a solid 12 inch by 20 inch pan placed under a perforated pan. Perforated pans are used for frankfurters, wieners and similar items when juices do not need to be preserved. Solid pans are good for cooking puddings, rice and hot breakfast cereals. Vegetables and fruits are cooked in solid pans to preserve their own juices. Meats and poultry are cooked in solid pans to preserve their own juices or to retain broth. Canned foods may be heated in their opened cans (cans placed in 12 inch by 20 inch solid pans) or the contents may be poured into solid pans.

ACCEPTABLE PAN SIZES

The steamer accommodates combinations of 12" x 20" pans, solid or perforated.

Model	Number of Pans Accommodated			
	Depth of Pan			
	1"	2.5"	4"	6"
PS-3E	6	3	2	1
PS-6E	12	6	3	2

4.0 SUGGESTED COOKING GUIDELINES

COOKING HINTS

Your steamer efficiently cooks vegetables or other foods for immediate serving. Steam cooking should be carefully time controlled. Keep hot food holding-time to a minimum to produce the most appetizing results. Prepare small batches, cook only enough to start serving, then cook additional amounts to meet demand.

Preparation

Prepare vegetables, fruits, meats, seafood, and poultry normally by cleaning, separating, cutting, removing stems, etc. Cook root vegetables in a perforated pan. Other vegetables may be cooked in a perforated pan unless juices are being saved. Liquids can be collected in a solid pan placed under a perforated pan.

Perforated pans are used for frankfurters, wieners, and similar items when juices do not need to be preserved. Solid pans are good for cooking puddings, rice and hot breakfast cereals. Vegetables and fruits are cooked in solid pans in their own juice. Meats and poultry are cooked in solid pans to preserve their juice or return broth.

Canned foods can be heated in their opened cans (cans placed in solid pans), or the contents may be poured into solid pans. DO NOT place unopened cans in the steamer.

Frozen Food Items

Separate frozen foods into smaller pieces to allow more efficient cooking.

Use a pan cover for precooked frozen dishes that cannot be cooked in the covered containers in which they are packed if they require more than 15 minutes of cooking time. When a cover is used, approximately one-third additional cooking time is necessary. Cooking time for frozen foods depends on the amount of defrosting required. If time permits, allow frozen foods to partially thaw overnight in a refrigerator. This will reduce their cooking time.

4.0 SUGGESTED COOKING GUIDELINES

<u>PRODUCT</u>	<u>TIMER SETTING (Minutes)</u>	<u>WEIGHT PER PAN</u>
Eggs	10 - 12	8 dozen
Scrambled	15	4 dozen
Hard Cooked	25	2 lb
Rice, long grain (cover with 4 cups water/lb.)	25	2 lb
Pasta (Place perforated pan inside solid pan, cover with cold water)		
Spaghetti, regular/vermicelli	12 -15	
Macaroni, shells/elbows	15 - 18	
Lasagne noodles	15 - 18	
Frozen Casseroles, Lasagne	35	Full Pan
Meat Loaf, 3 - 5 lb each	40	15 lb
Beef		
Ground Chuck	20 - 25	10 lb
Beans		
Baked/Refried	9	10 lb can
Chicken - Breasts, Legs, Thighs	20	15 lb
Turkey, Frozen		
Breasts (2)	90	6 - 7 lb each
Hot Dogs	3	80 - 100
SEAFOOD		
Clams		
Frozen	10 - 12	3 dozen
Fresh, Cherrystone	5 - 6	3 dozen
King Crab, Frozen		
Claws	4	2 ½ lb
Legs	4 - 6	4 ½ lb
Shrimp, Frozen, 10 per lb.	5	4 lb

<u>PRODUCT</u>	<u>TIMER SETTING (Minutes)</u>	<u>WEIGHT PER PAN</u>
Lobster Tail, Frozen	6	10 lb
Lobster, Live, 10" - 12"	5	4 per pan
Scallops, Fresh	4	3 lb
Scrod Fillets, Fresh	3 - 5	4 lb
VEGETABLES		
Asparagus Spears		
Frozen	10 - 12	3 dozen
Fresh	5	5 lb
Beans		
Green, 2" cut, Frozen/Fresh	6	5 lb
Lima, Frozen	8	5 lb
Broccoli		
Spears, Frozen	8	4 lb
Spears, Fresh	6	5 lb
Florets, Frozen	6	5 lb
Carrots		
Baby Whole, Frozen	8	7 lb
Crinkle Cut, Frozen	7 - 8	4 lb
Sliced, Fresh	11	9 lb
Cauliflower, Florets		
Frozen	6	4 lb
Fresh	7 - 8	5 lb
Corn		
Yellow Whole Kernel, Frozen	5	5 lb
Cobbettes, Frozen	8	27 ears
Corn-on-Cob, Fresh	10 - 12	18 ears
Peas, Green	6	5 lb
Potatoes, Whole Russet	55	40 lb

<u>PRODUCT</u>	<u>TIMER SETTING (Minutes)</u>	<u>WEIGHT PER PAN</u>
Zucchini, Slices	8	10 lb
Canned Vegetables	6	10 lb can
Frozen Mixed Vegetables	6 - 7	5 lb

5.0 CLEANING



WARNING: Disconnect the power supply to the appliance before cleaning or servicing.



CAUTION: Do not use cleaning agents that are corrosive.



CAUTION: The appliance and its parts are hot. Use care when operating, cleaning and servicing the appliance.



CAUTION: Live steam and accumulated hot water in the compartment may be released when the door is opened.

At the end of each day, or between cooking cycles if necessary:

1. Turn main power switch OFF.
2. Remove pans and racks from compartment and wash in sink.
3. Wash compartment interior with clean water.
4. Use warm soapy water with a cloth or sponge to clean exposed bead of door gasket, rinse with warm clear water and wipe with a dry cloth.
5. Wipe surfaces which touch door gasket with a cloth or sponge and warm soapy water, rinse with warm clear water and wipe with a dry cloth. **Do not apply food oils or petroleum solvents or lubricants directly to door gasket or surfaces which touch door gasket.**
6. Wipe all solids away from drain opening in compartments to prevent clogging.
7. Keep cooking compartment drain working freely. After cooking grease producing foods, operate steam with compartment empty for 30 minutes at end of the day, or pour 1/2 gallon of warm soapy water down the drain, followed by 1/2 gallon of warm clear water.
8. Leave door slightly open when steamer is not in use.

5.0 CLEANING (Continued)

Weekly, or more often if necessary:

Clean exterior with a damp cloth and polish with a soft dry cloth. Use a non-abrasive cleaner to remove discolouration.



CAUTION: An obstructed drain can cause personal injury or property damage.

GUIDELINES FOR MAINTAINING STAINLESS STEEL SURFACES

There are three things that can break down stainless steel and allow corrosion to develop:

- 1) Abrasion;
- 2) Deposits and water;
- 3) Chlorides.

Avoid rubbing with steel pads, wire brushes, or scrapers that can leave iron deposits on stainless steel; instead, use plastic scouring pads or soft cloths. For stubborn stains, use products such as Cameo, Talc, or Zud First Impression. Always rub parallel to polish lines or with the grain.

Hard water can leave deposits that promote rust on stainless steel. Treated water from softeners or certain filters can eliminate these mineral deposits. Other deposits from food or lubrication must be properly removed by cleaning. Use mild detergent and non-chloride cleaners. Rinse thoroughly. Wipe dry. If using chloride containing cleaners or sanitizers, ***rinse repeatedly*** to avoid stainless steel corrosion. Where appropriate, apply a polish recommended for stainless steel (such as Benefit or Super Sheen) for extra protection and lustre.

6.0 MAINTENANCE



WARNING: Disconnect the power supply to the appliance before cleaning or servicing.



CAUTION: Live steam and accumulated hot water in the compartment may be released when the door is opened.



CAUTION: The appliance and its parts are hot. Use care when operating, cleaning and servicing the appliance.

COLD WATER CONDENSER

The steamer is equipped with a cold water condenser in the rear of the cooking chamber which helps to condense the steam prior to discharge into the drain. The steamer freely vents itself by the negative pressure created by the condensate water drainage. This negative pressure prevents steam leakage around the door gasket and helps draw the steam through the cooking compartment. Steam leakage at the door may indicate a plugged or improperly installed drain.

REMOVAL OF SCALE DEPOSITS

It is recommended that your steamer be delimed once a month, or more often if necessary.

Should your steamer develop a heavy build-up of lime scale deposits, use CLR.

Before beginning deliming procedures, ensure that water is not overflowing into the cooking compartment.

The generator tank has a removable sealed tank cover. The main purpose of the removable cover is for inspection of the interior of the tank for lime build up and easy removal of large pieces of lime that will not flush out drain. Should the tank cover have to be removed, check condition of sealing gasket before replacing cover. The hold down bolts are to be tightened to 160 inch pound torque each.

REMOVAL OF SCALE DEPOSITS (Continued)



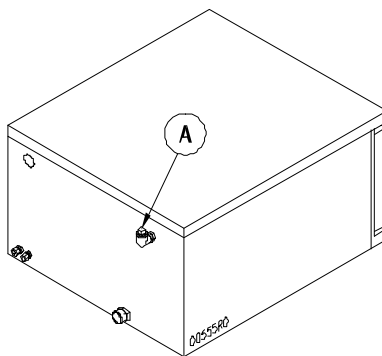
NOTICE: Contact the factory, the factory representative or local service company to perform maintenance and repairs.



WARNING: Read and follow instructions on the CLR bottle. Use plastic or rubber gloves to avoid skin contact. If CLR comes in contact with skin, rinse with clean water.

1. Drain steam generator by setting the main power switch to OFF. Set cooking timer to "OFF".
2. Set the main power switch to DELIME.
3. Delime port (A) is located on left side at rear of unit. Unscrew hex plug from elbow to allow CLR solution to be poured in using a tube and funnel. Pour in 28 ounces of solution into the generator (pour slowly to avoid spillage). Remove tube and funnel.
4. Screw the hex plug back into the elbow so that it is sealed.
5. Turn main power switch to ON.
6. Allow steamer to remain in READY cycle for 1-1/2 hours, then turn main power switch OFF and allow generator to drain.
7. FLUSH CYCLE: Turn main power switch to ON. When READY light comes on, turn main power switch to OFF to flush generator. Repeat this step three times to completely flush generator.
8. Clean exterior and interior. Use a mild solution of soap and water. Rinse with clean cloth. Dry with soft cloth. Leave compartment door open when not in use.

The steamer is now ready for use. Turn off for overnight shutdown.



7.0 SERVICE

NOTICE: Contact the factory, the factory representative or local service company to perform any maintenance and repairs.

ADJUSTMENT FOR HIGH ALTITUDE LOCATIONS

The steamer has been factory set so that when it is ON and during the READY phase, it will maintain water temperature in the steam generator tank at approximately 205°Fahrenheit (just below water boiling point). However, for high altitude locations, an authorized service agent must adjust the steamer to achieve this temperature. To adjust:

1. Remove side panel and turn control panel power switch to ON.
2. Open compartment door, and after about 15 minutes, steam will be seen, entering the cooking compartment.
3. Turn thermostat dial counter clockwise to lower temperature until steam just ceases to enter cooking compartment and READY light goes on.
4. Replace side panel.
5. Follow TESTING PROCEDURES in this manual.

WATER FLOWS INTO DRAIN DURING SHUTDOWN

When steamer is shut down and cold water is running continuously into the open drain, either or both solenoid valves did not close when steamer was turned off.

1. Disassemble solenoid valve(s) and examine for scale or foreign particles lodged in diaphragm or core tube.
2. Clean valve(s) thoroughly and reassemble, or replace valve(s).

DRAIN WATER TEMPERATURE TOO LOW OR TOO HIGH

Cooling solenoid valves are adjustable with fine adjustment screw on the bottom of the valve.

1. Run cooking compartment empty until drain temperature stabilizes.
2. Turn fine adjustment screw on cooling solenoid valve out to decrease drain temperature and in to increase drain temperature.

7.0 SERVICE (Continued)

WATER OVERFLOWS INTO COOKING COMPARTMENT

When steamer is first turned on for the day, and the following conditions occur:

- READY light does not come on after about 15 minutes,
- Water begins to overflow into cooking compartment,
- Water fill solenoid valve is open,

then any or all of these symptoms may indicate a problem with the operating probe due to either:

1. A short between the operating probe terminal and body of the steamer. Call your authorized service agent.
2. Excessive scale build-up on the operating probe. This acts as an "insulation" and prevents the probe from sensing the water level. It is therefore unable to close the water fill (solenoid) valve to shut off the water.

As a temporary solution, with power OFF, unscrew probes, check visually, and clean or chip off scalant. Replace probe.

This problem is an indication of severe harmful water conditions which should be corrected immediately to avoid damage to the components and ultimate malfunction of the steamer. (See WATER CONDITIONING in this manual).

HEATER ELEMENTS DO NOT COME ON

When the steamer is turned ON and heater elements do not activate, and therefore, the READY light does not come on, then the contactors may be burned out. If a considerable amount of "chattering" of contactors has been previously experienced, then the thermostat bulb may be coated with scalant and unable to sense water temperature in the boiler accurately, and therefore unable to control the contactors.

1. Replace contactors.
2. Unscrew operating thermostat bulb, clean off scalants and screw thermostat bulb back in.

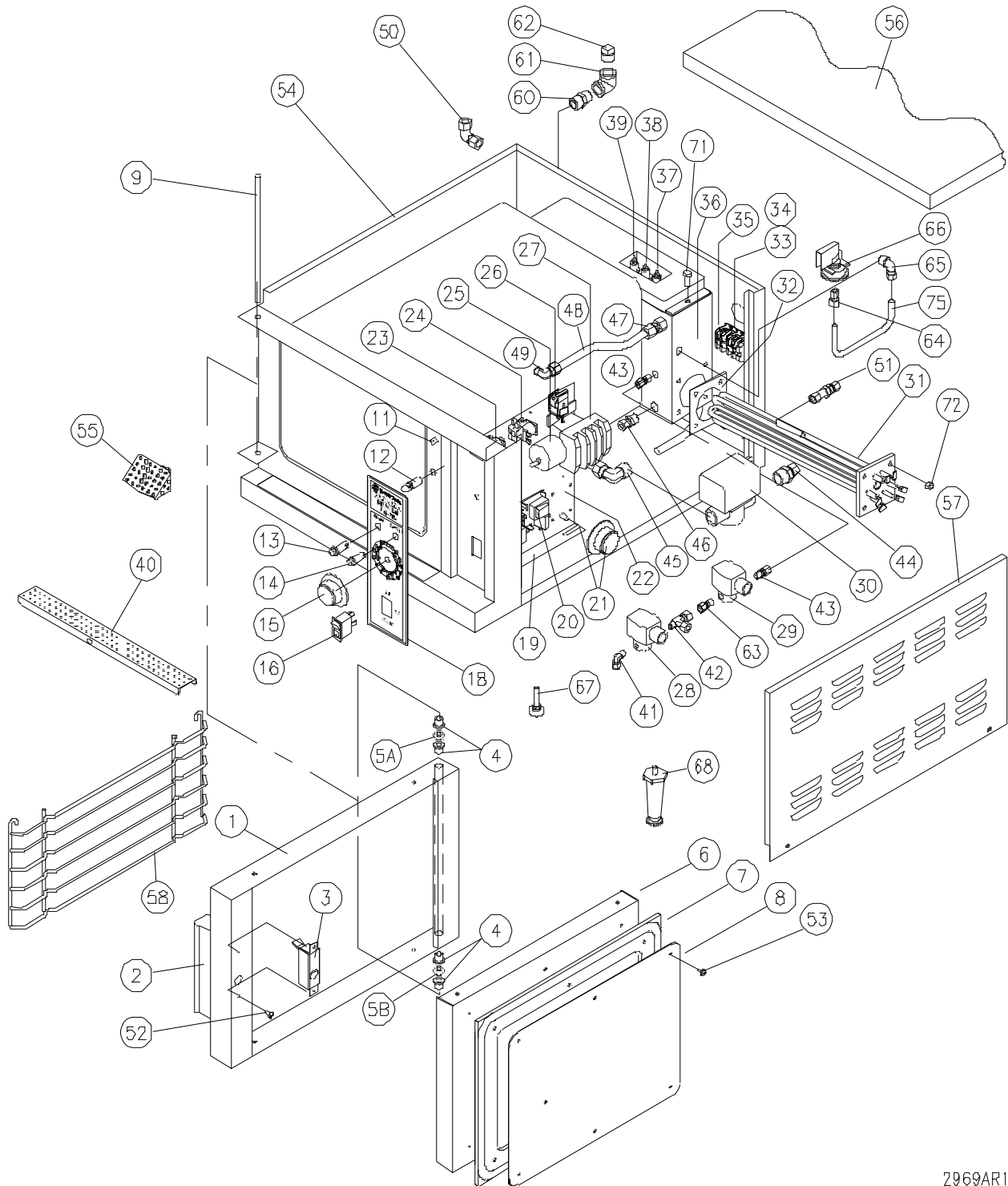
This problem is an indication of inadequate water quality and is not covered under warranty. Have water quality analysed and corrected immediately to avoid complete malfunction of the steamer.

7.0 **SERVICE** (Continued)

UNIT SHUTS DOWN WHILE IN OPERATION

Pressure switch has been activated due to 5 PSI (35 kg/cm^2) pressure in the generator tank. Pressure in the generator tank is caused due to plugged steam jet tubes or steam diverters due to scale or poor water conditions. Steam jet tubes/steam diverter will have to be cleaned or replaced.

FIGURE 3



Z969AR1

8.0 PARTS

GENERAL ASSEMBLY

FIGURE 3

<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>	
			PS-3E	PS-6E
1A	97-6254	Door Assembly	1	
	97-6373	Door Assembly		1
1	97-6295	Door Frame	1	
	97-6227	Door Frame		1
2	97-6231	Door Handle Assembly	1	1
*	97-6235	Decal	1	1
*	97-6258	Door Handle	1	1
*	97-6259	Door Handle Plate	1	1
*	98-9165	Socket Set Screw, 1/4 - 20 x 1-3/4	2	2
*	97-5349	Socket Set Screw, 1/4 - 20 x 3/4	1	1
*	97-6260	Spacer	2	2
*	97-6297	Lock Washer, 1/4	2	2
*	97-6298	Hex Nut, 1/4 - 20	2	2
3	97-6232	Latch Assembly	1	1
4	97-6261	Door Bushing	4	4
5A	97-6734	Spacer - Upper	1	1
5B	97-6735	Spacer - Lower	1	1
6	97-6262	Door Panel	1	
	97-6230	Door Panel		1
7	97-6264	Door Gasket	1	
	97-6228	Door Gasket		1
8	97-6266	Gasket Plate	1	
	97-6266	Gasket Plate		1
9	97-6299	Hinge Rod	1	
	97-6364	Hinge Rod		1

<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>	
			PS-3E	PS-6E
*10	97-6300	Steam Diverter	2	2
11	97-6301	Actuator Complete With Retaining Rings	1	1
*	97-6191	Door Switch	1	1
12	97-6178	Striker	1	1
*	97-6302	Stainless Steel Washer	1	1
*	97-6650	Lock Washer	1	1
*	97-6651	Nut	1	1
13	97-6270	Pilot Light, Green	1	1
14	97-6271	Pilot Light, Red	1	1
**15	98-6046	Timer Dial	1	1
16	97-6272	Power Switch	1	1
*17	97-6303	Label, De-Lime (Rear of Unit)	1	1
**18	97-6304	Control Decal	1	
	97-6305	Control Decal		1
19	97-6275	Component Mounting Board	1	1
**20	97-6276	Level Control Board, 10K OHM	1	1
	97-6277	Level Control Board, 1M OHM	2	2
21	97-5048	Thermostat - Operating	1	1
	97-6736	Dial	1	1
22	97-6278	High Limit Thermostat	1	1
23	97-6279	Relay - Single Pole, 240V	1	1
24	97-6280	Relay - Double Pole, 240V	1	1
25	08-6621	Timer, 230 VAC	1	1
*	08-6464	Rotary Shaft Seal	1	1
26	97-6307	Buzzer, 240V	1	1
**27	98-6189	Contactor - 4 Pole (208, 220, 240V)	1	1
	97-5609	Contactor - 380, 415, 480, 600 Volt	1	1

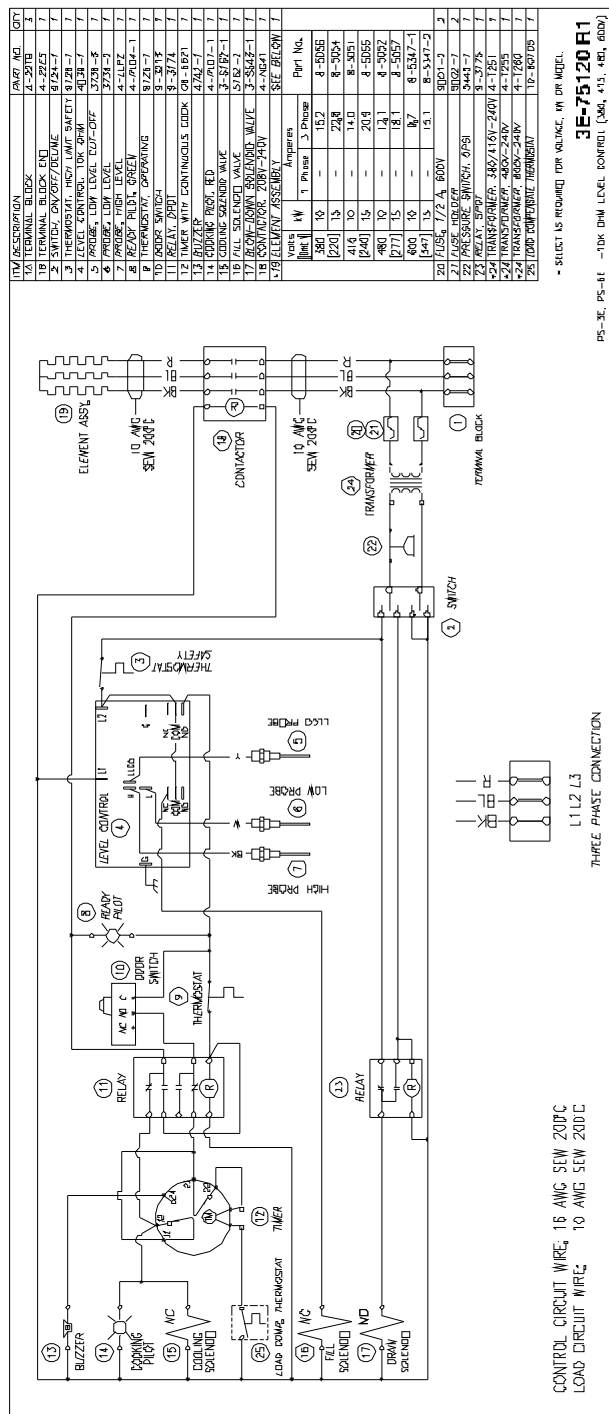
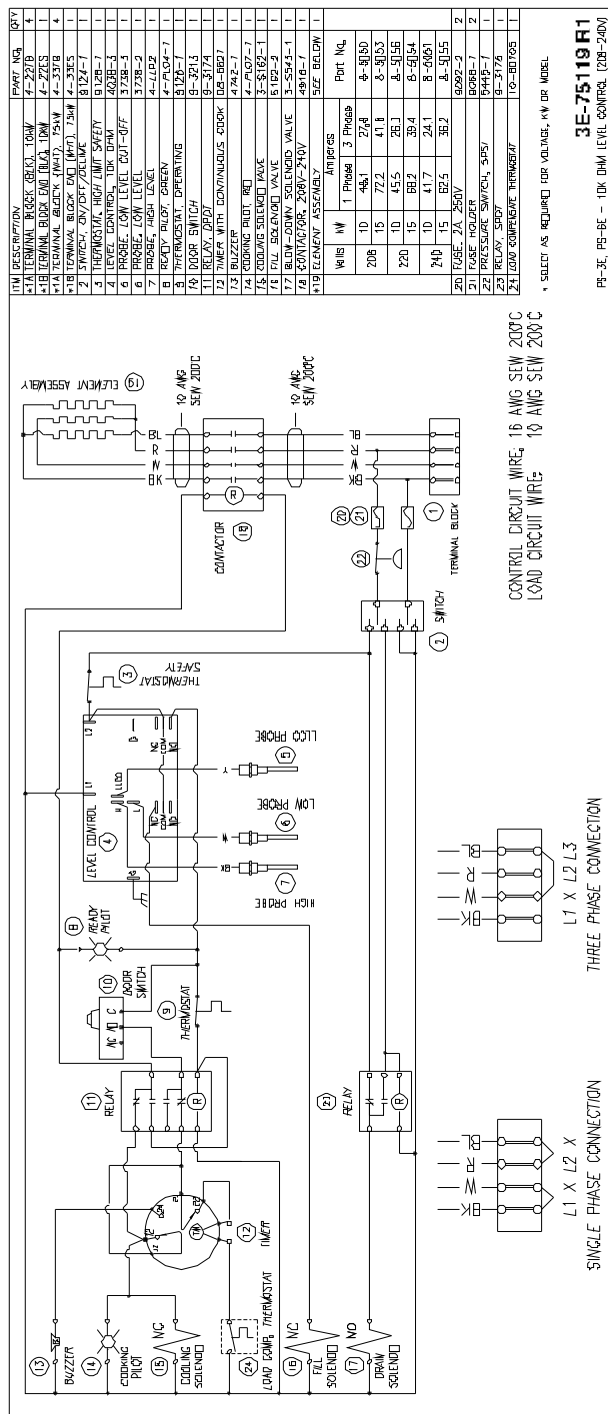
<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>	
			PS-3E	PS-6E
28	97-6285	Cooling Solenoid, 240V, Metering	1	1
29	97-6308	Fill Solenoid, 240V	1	1
30	97-6283	Blow-down Solenoid, 240V	1	1
**31	97-6309	Element Assembly, 10 kW, 208V	1	
	97-6310	Element Assembly, 10 kW, 220/380V	1	
	97-6311	Element Assembly, 10 kW, 240/415V	1	
	97-6312	Element Assembly, 10 kW, 480V (287)	1	
	97-6313	Element Assembly, 10 kW, 600V (347)	1	
	97-6314	Element Assembly, 15 kW, 208V		1
	97-6315	Element Assembly, 15 kW, 220/380V		1
	97-6316	Element Assembly, 15 kW, 240/415V		1
	97-6317	Element Assembly, 15 kW, 480V (287)		1
	97-6318	Element Assembly, 15 kW, 600V (347)		1
32	97-6319	Element Gasket	1	1
**33	10-6963	Terminal Block, 208-240V, 10 kW, Black	4	
	98-6185	Terminal Block, 208-240V, 15 kW, White		4
*	97-6737	Terminal Rail, 208-240V, 15 kW		1
	10-6963	Terminal Block, 380/220V 415/240V, Black	4	4
	10-6963	Terminal Block, 380-600V, Black	3	3
**34	10-6962	End Section, Black	1	1
	98-6186	End Section, 208-240V, 15 kW, White	1	1
*35	97-5052	Ground Lug	1	1
	97-6738	Earth I.D. Tag	1	1
36	97-6321	Steam Generator Tank	1	1
*	97-6322	Tank Cover	1	1
	97-6323	Tank Gasket	1	1
37	97-6324	Probe - 5" Low Level Cut Off	1	1

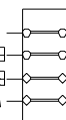
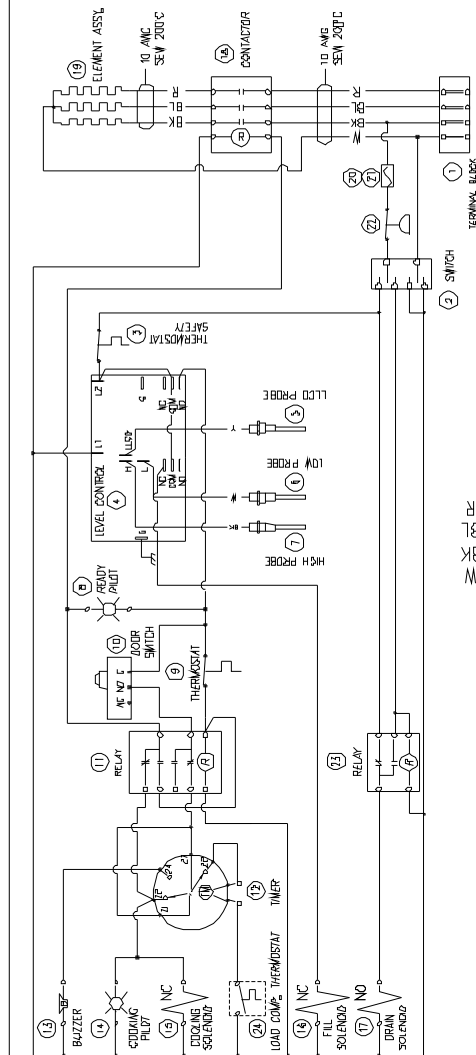
<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>	
			PS-3E	PS-6E
38	97-6325	Probe - 4.25" Low Level	1	1
39	97-6326	Probe - 3.688" High Level	1	1
40	97-6177	Perforated Trough	1	1
41	98-6089	Elbow, 1/4 c x 1/8 MPT	1	1
42	97-6327	Tee, 3/8 c x 1/8 MPT	1	1
43	98-6123	Connector, 1/4 c x 1/8 MPT	1	1
44	97-6328	Connector, 1/2 c x 3/4 MPT	1	1
45	97-6208	Elbow, 1/2 c x 3/4 MPT	1	1
46	97-5619	Thermostat Fitting, 3/8 c x 3/8 MPT	1	1
47	97-6206	Union Coupling, 1/2 c	1	1
48	97-6329	Right Hand Steam Jet Tube	1	1
*	97-6330	Left Hand Steam Jet Tube	1	1
49	97-6331	Elbow, 1/2 c x 1/4 MPT	2	2
50	97-6207	Elbow, 1/2 c	1	1
51	97-6226	Water Connection, 3/8 c	1	1
52	97-6739	Screw, 10-32 x 1/2 SS	6	6
53	97-6233	Screw, (Special), 10-32 x 1/2	6	8
54	97-6332	Left Hand Side and Back	1	
54	97-6333	Left Hand Side and Back		1
55	97-6334	Compartment Strainer	1	1
56	97-6335	Top	1	1
**57	97-6336	Side Panel	1	
	97-6337	Side Panel		1
**58	97-6338	Rack Slides	2	
	97-6339	Rack Slides		2
*59	97-6340	Rack Pin Assembly	4	4
60	97-6341	Brass Nipple, 1/2 -14	1	1

<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>	
			PS-3E	PS-6E
61	97-6342	Brass Elbow, 1/2 -14	1	1
62	97-6740	Brass Plug, 1/2 - 14, Hex Head	1	1
63	97-6344	Connector, 3/8 c x 1/8 MPT	1	1
64	97-6591	Connector, 3/8 c x 1/8 FPT	1	1
65	97-6346	Elbow 90E, 3/8 c x 3/8 MPT	1	1
66	97-6347	Pressure Switch	1	1
67	97-6348	Leveler	4	4
68	97-6211	Adjustable Leg, Optional	4	4
* **69	97-6186	Fuse, 2 Amp., 250V (208, 240V)	2	2
	97-6186	Fuse, 2 Amp., 250V (220, 220/380, 240/415)	1	1
* **	98-6188	Fuse, 1/2 Amp, 600V (380, 415, 480, 600V)	2	2
	97-5864	Fuse Holder (208, 240V)	2	2
	97-5864	Fuse Holder (220, 220/380, 240/415V)	1	1
	97-6187	Fuse Holder (380, 415, 480, 600V)	2	2
* **70	97-5616	Transformer, 380-220V, 50/60 Hz, 100VA	1	1
	97-5616	Transformer, 415-240V, 50/60 Hz, 100VA	1	1
	97-5613	Transformer, 480-240V, 60 Hz, 100VA	1	1
	98-6191	Transformer, 600-240V, 60 Hz, 100VA	1	1
71	97-6663	Hex Blot, 5/16-18 x 1 SS	2	2
72	97-6298	Hex Nut, 1/4 - 20 SS	4	4
*73	97-6349	"Y" Strainer, Optional	1	1
*74	97-6741	Wire Harness	1	1
75	97-6351	Copper Tube, 3/8	1	1

* NOT SHOWN

** SELECT AS REQUIRED

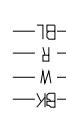
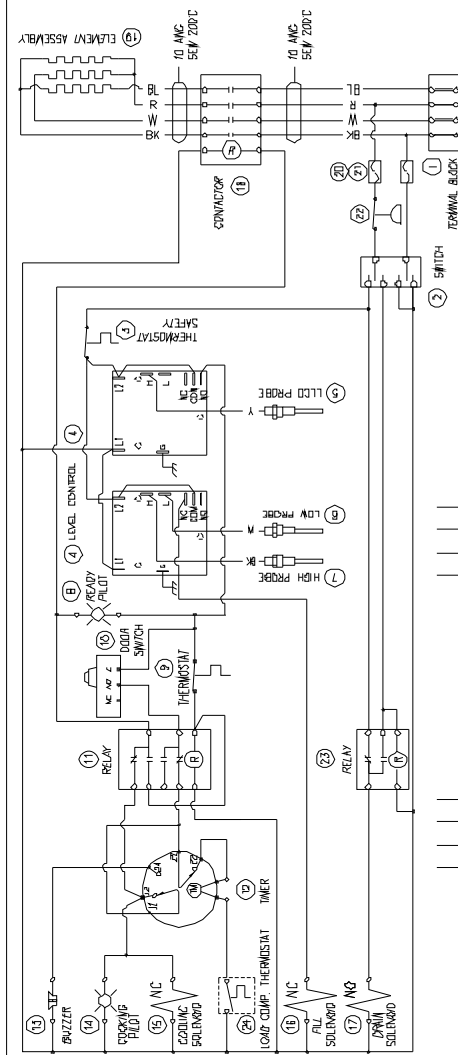




CONTROL CIRCUIT WIRE: 16 AWG SEW 200°C
LOAD CIRCUIT WIRE: 10 AWG SEW 200°C

THREE PHASE CONNECTION

PS-3E, PS-6E -10K OHM LEVEL CONTROL (380/220V, +15/240V)
3E-75121 R1



14 x 10 17

PS-3f, PS-6E - RQ LEVEL CONTROL (208-246V)

